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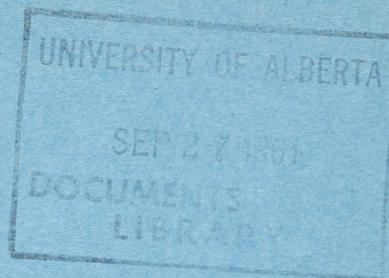
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CANADA



ANNUAL REPORT

OF THE

Board of Grain Commissioners for Canada

FOR THE YEAR

1960

DEPARTMENT OF AGRICULTURE
OTTAWA, CANADA

Minister:
HON. ALVIN HAMILTON, M.P.

Deputy Minister:
S. C. BARRY

ROGER DUHAMEL, F.R.S.C.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1961

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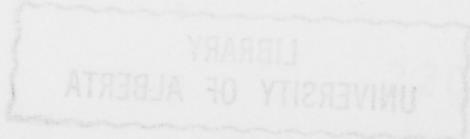
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Winnipeg, Manitoba,
January 13, 1961.

The Honourable Alvin Hamilton, M.P.,
Minister of Agriculture,
Ottawa, Canada.

Sir:

We beg to submit herewith Report of the Board of Grain Commissioners for Canada for the year 1960 in compliance with Section 23 of the Canada Grain Act.

This report records information and statistics relating to grain handlings for the crop year August 1, 1959 to July 31, 1960, expenditures and revenue for the fiscal year April 1, 1959 to March 31, 1960, and summarizes the major activities of the Board for the 1960 calendar year.

Grain Supplies and Disposition—Crop Year 1959-60

Canada's grain carryover was further reduced during the 1959-60 crop year despite declines in the disappearance through both domestic and export outlets. By July 31, 1960, combined stocks of wheat, oats, barley, rye and flaxseed in all positions totalled 763.5 million bushels, some 47.1 millions or 6% below the storage volume at the preceding year ending and 356.8 millions lighter than the record carryover of 1,120.3 millions on July 31, 1957.

The inward carryover at August 1, 1959, was estimated at 810.6 million bushels held either in licensed storage, or in farmers' bins, or in transit between positions. The 1959 crops of wheat, 413.5 millions, and oats 417.9 millions, were above 1958 production, that of rye steady at 8.1 millions and those of barley 225.6 and flaxseed 17.7 millions, were below the previous year's output. The combined production of 1,082.8 million bushels, added to the inward carryover, established the available supplies at 1,893.4 million bushels for 1959-60 domestic needs and exports.

The 1959-60 commercial disappearance of 1,129.9 millions was made up of 352.4 millions exported in the form of grain or wheat flour and 777.5 millions utilized within Canada for feed, seed, human food and industrial use. Both exports and domestic usage were down from the corresponding volumes for the 1958-59 season although still well above the long-term 30-year averages for these movements.

Within the licensed elevator system the individual sector operations reflected a varied pattern. Country marketings were down in total, although wheat deliveries were heavier than in the previous season. Country elevator shipments held relatively steady but a shift in the distribution pattern was indicated by an increased movement to Lakehead terminals and to mills. Carlots to the Pacific Coast fell off as ocean shipping at that sector was cut back; this resulted in lighter shipments from Alberta elevators and a heavier movement from Saskatchewan points. At Fort William-Port Arthur terminals the vessel movement showed a slight increase. The period August 1, 1959 to July 31, 1960 represented the first complete crop year of operations subsequent to the opening of the St. Lawrence Seaway. The development of a direct overseas cargo movement in volume from the Canadian Lakehead, the elimination of a substantial portion of the transfer vessel movement at Lower Lake ports and the impact of these developments on operations at the St. Lawrence River elevators, are immediate results reflected in the handling statistics.

Marketings

The restricting influence of the continued congested storage situation on the primary movement into the licensed system was again indicated in 1959-60 by a further decline in country marketings at western points. Total deliveries during the crop year to all licensed elevators, east and west, amounted to 518.8 million bushels of wheat, oats, barley, rye, and flaxseed combined,—38.0 millions below the previous season's intake. Deliveries to western country elevators totalled 512.0 millions, with primary marketings at interior terminals and mills accounting for 4.6 millions, and loadings over platforms a further .2 millions. Primary deliveries of eastern grown grain direct to licensed eastern elevators at 2.0 millions were the lightest in recent years. Wheat marketings did not reflect the downward trend of the total and at 379.9 millions were slightly above the 1958-59 inward volume. The principal decline in marketings occurred in barley (95.6 millions compared with 121.3 millions the year previous) and in oats for which the 24.6 millions delivered represented the lightest marketings of this grain in over 30 years.

Country Shipments

The volume of grain moving forward from country elevators was relatively steady during 1959-60, at 525.2 millions in total. The carlot movement had registered a sharp decline in 1958-59 but this was not repeated and wheat shipments were 17.0 millions heavier at 367.0 millions and close to the 1957-58 level. The distribution pattern of this rail movement showed a reduced percentage (25.2%) billed for west coast destinations, reflecting a reversal of the trend of recent years during which the carlot movement to Pacific Coast terminals had risen progressively from 21.0% of total country shipments in 1955-56 to 28.1% in 1958-59.

Terminal Handlings

Receipts and shipments at the Fort William-Port Arthur terminal group were slightly heavier during 1959-60 at 299.7 millions unloaded and 295.4 millions shipped. The lake portion (286.7 millions) of the latter figure was 8.5 millions higher than the previous year's vessel movement as a result of increases in both direct overseas shipping (16.8 millions compared with 11.9 millions) and cargoes billed to United States lake ports (19.4 millions against 15.9 millions in 1958-59).

Pacific coast terminals reported a reduced handling volume for the second consecutive year. Wheat shipments were down 11.4 millions at 95.1 millions, and barley loadings dropped 5.0 millions to 31.9 millions. Clearances of oats at 2.7 millions, rye at .3 millions and flaxseed at 6.8 millions, completed the 136.8 millions of ocean shipping through this sector—17.3 millions less than the 1958-59 outbound traffic and 32.8 millions below the peak movement recorded in 1957-58.

The Port of Churchill handled 21.7 million bushels of wheat and .1 millions of oats during the 1959-60 crop season to establish a new record for shipping through the North-east passage. The 1960 season of navigation, the initial portion of which is included in the above crop year figures, saw a slight falling off in Churchill loadings. Forty-eight vessels carried a total wheat cargo of 19.6 millions, compared with the 58 vessels and 21.8 millions in 1959.

The damp harvest of 1959 resulted in substantial grain-drying operations at all terminal positions. A total of 76.6 million bushels of wheat, oats, barley, rye and flaxseed combined were dried during the crop year—53.3 millions by artificial and 23.3 millions by natural means. The largest portion of this operation, 45.7 millions, was accomplished at the Fort William-Port

Arthur terminals; Pacific Coast terminals dried 27.9 millions; interior terminals dried 2.7 millions, and a further .2 millions were dried at Churchill. This volume is, of course, short of the 168.8 millions dried in 1951-52 following the very difficult harvest of the 1951 crop, when Canadian facilities were supplemented by driers at Duluth, Buffalo and certain Eastern Canadian points.

Eastern Elevator Handlings

Export shipments through the Eastern elevator section of the Canadian system continued to decline insofar as Canadian grain was concerned. Total clearances for the 1959-60 season amounted to 118.6 millions, made up of 93.6 millions through St. Lawrence River ports and 25.0 millions through the Maritime ports of Saint John and Halifax. The River port loadings were 14.5 millions below 1958-59 levels, while the Maritime sector dropped behind by 6.1 millions. The declines were fairly proportioned between ports. The volume of Canadian grain moved through all eastern elevators to supply Eastern Canadian domestic needs and for milling for export held relatively steady at 118.5 millions.

The impact of the Seaway on the eastern handling pattern was reflected directly in the sharp reduction in the transfer movement (principally at Lower Lake ports) which dropped from 151.4 millions in 1958-59 to 97.6 millions in 1959-60, as 73.7 millions of grain moved direct from the Canadian Lakehead to the St. Lawrence River ports in contrast to only 28.5 millions in the previous year. The handling of U.S. grain for reloading to ocean vessels, chiefly through Montreal, totalled 20.9 million bushels during the crop year. The eastern elevators also moved 10 millions of U.S. grain to Canadian domestic channels and transfer shipped a further 1.2 millions back to Eastern U.S. points.

The winter movement through Halifax and Saint John did not appear to be adversely affected by the Seaway. The decline of 6.1 millions was roughly proportional to the falling off in exports of Canadian grain from the St. Lawrence ports. The trial movement of grain from the Head of the Lakes to Maritime ports by the all-water route was further expanded from .4 millions in 1958-59 to 3.8 millions in 1959-60. The bulk of this grain was for domestic use, although a portion was unloaded at Halifax for storage for subsequent export.

Exports

Canada exported 234.7 million bushels of wheat, 37.4 millions of wheat flour (wheat equivalent), 5.6 million bushels of oats, 57.7 millions of barley, 4.5 millions of rye, and 12.5 million bushels of flaxseed during the 1959-60 crop season. Exports of the five principal grains, together with the grain equivalents of wheat flour, totalled 352.4 million bushels, some 26 million bushels below last year's clearances but still well above the 30-year average for Canadian grain exports calculated at 314.5 millions. Compared with 1958-59 clearances, declines were registered in wheat (17.5 millions), oats (1.4 millions), barley (6.7 millions) and flaxseed (1.8 millions), while export shipments of wheat flour and rye were heavier by .3 millions and 1.3 millions, respectively. On the basis of international grain movement estimates compiled by the Cereal Section of the Food and Agriculture Organization in Rome, Canada's exports represented 22.4% of the world trade in bread grains, and 18% of the trade in oats, barley and flaxseed.

Domestic Usage

Canada's farms and industrial plants absorbed a total of 777.5 million bushels of wheat, oats, barley, rye and flaxseed, for feed, seed and manufacturing purposes in 1959-60. This represented a slight decline from the previous year's consumption and a temporary halt in the progressive expansion which has been the pattern since 1954-55. The bulk of this disappearance was direct from farm stocks, either on the farm on which the grain was produced or through a farmer-to-farmer sale. The industrial portion, that is the total quantities used for milling for human use, for malting and distilling, and for oil crushing, held steady at approximately 75 millions for the crop year. The domestic consumption totals for the individual grains, all purposes combined, have been estimated as follows, with 1958-59 comparative totals in brackets: Wheat 152.8 (173.4), oats 438.5 (429.8), barley 174.5 (170.4), rye 4.8 (6.9), and flaxseed 6.9 (7.6), all millions of bushels.

Carryover

Notwithstanding the declines in both exports and domestic usage, the combined disappearance total of 1,129.9 millions still exceeded new production by 47.1 millions and reduced the annual carryover, all grains, by this amount. This represented the third consecutive reduction in Canada's year-end grain holdings following the record carryover of July 31, 1957 (1,120.3 millions). The 763.5 millions indicated by elevator returns and estimates of farm-held stocks as either in store in licensed elevators or farmers' bins or in transit between positions on July 31, 1960, reflected reductions in the carryover of all grains shown by the following comparative figures, with 1959 totals in brackets: wheat 537.6 (549.0), oats 92.8 (119.0), barley 121.5 (128.2) rye 6.8 (7.9), and flaxseed 4.9 (6.5), all millions of bushels. The total quantity held in licensed storage positions remained steady at 539.3 millions with the heavier year-end stocks of wheat offset by reduced visible holdings of oats and barley. The lighter carryover again was largely attributable to smaller farm stocks of wheat (81.7 millions compared with 130.0 millions on July 31, 1959).

Licensing and Bonding

The total licensed storage capacity at July 31, 1960, was 639,054,610 bushels—631,884,110 bushels in elevators and 7,170,500 bushels in grain storage buildings authorized as supplementary annexes to country elevators. Licences were in effect for 5,413 country, terminal, mill and eastern elevators, a decrease in capacity of 2,891,640 bushels and in licences of 15 compared with corresponding figures as at July 31, 1959. Country elevator capacity was reduced by 16.2 million bushels while terminal and eastern elevator facilities were augmented by 17.4 million bushels of new space including the construction of a complete new elevator at Baie Comeau.

Assistant Commissioners

Through its four Assistant Commissioners, the Board kept in close touch with the operation of licensed country elevators in the Western Division. During the year 1960, the Assistant Commissioners inspected 683 elevators in Manitoba, 1,098 in Northern Saskatchewan, 981 in Southern Saskatchewan, and 1,437 in Alberta, a total of 4,199. This inspection included checks on scales, sieves, moisture meters and certain other equipment; deductions for shrinkage and Prairie Farm Assistance Act Levy; and posting of current Board Regulations applying to country elevators.

Complaints originating from country points totalled 11, as compared with 19 in the previous year.

Disposition of complaints investigated was as follows:

	Manitoba	Saskatchewan	Alberta	Total
No grounds for complaint.....	—	—	1	1
Settlement effected.....	—	2	5	7
Complaint withdrawn.....	1	2	—	3
TOTALS.....	1	4	6	11

The Assistant Commissioners received and handled numerous inquiries on various matters related to country elevator operation. They also discussed accumulated overages with elevator agents concerned.

Prosecutions

One penalty in the amount of \$100.00 was levied against a licensee for failure to comply with instructions issued by the Board.

Shortages and Overages, Country Elevators

Country elevator companies were able to complete the weighover of stocks with respect to 2,101 elevators, some 300 more weighups than were made in 1958-59. A review of these audits indicated no significant changes in the pattern of overages and shortages from that which applied during the previous season as will be noted from the summary table shown below:

Elevators Reporting	1959-60	1958-59
Shortages.....	585	534
Neither Overages nor Shortages.....	4	6
Overages of less than .25%.....	980	846
Overages of .25% to .50%.....	413	316
Overages over .50%.....	119	99
Total elevators weighed over.....	2,101	1,801

The Board summoned 109 agents of country elevator licensees to appear at hearings held at Winnipeg, Regina, Saskatoon, Calgary and Edmonton, in connection with excessively high overages. At these sessions, members of the Board interviewed the agents and examined records concerning their operations in the presence of senior officials of the companies concerned.

Regulations

The following amendments were made to the Board's Regulations, effective August 1, 1960:

Regulation No. 5: The sections headed "Rejected" and "Sample" were revised to provide improved grade names for certain "off grades" of western grain.

Regulation No. 10: This was revised to make it applicable to licensed elevators at all St. Lawrence ports, rather than to Montreal only.

Regulation No. 18: Section 9 was revoked.

Committees on Grain Standards

A sub-committee of the Committee on Western Grain Standards met at Winnipeg on June 21, 1960, to consider problems relating to the grading of barley, and passed a resolution that several changes be made in grading procedure, effective August 1, 1960, including abolition of the commercial grade of No. 4 Canada Western Six-Row Barley.

The Board constituted Committees on Western and Eastern Grain Standards for the Crop Year 1960-61 as provided in Section 25 of the Canada Grain Act. Personnel of these Committees is listed in Appendix A.

A meeting of the Western Committee was held at Winnipeg on October 20, 1960. The members received numerous reports relating to quality of crops grown in the 1960 season and to various other matters in connection with grading of grain, and also selected and settled standard samples and standard export samples for various grades of Western grain.

The Eastern Committee met in Toronto on August 17, 1960, and in Montreal on October 26, 1960, and established standard samples for grades of grain grown in Eastern Canada.

Both groups authorized continued use of previously selected standard samples in instances where suitable recent samples for established grades were not available.

Inspection of Grain

Grain crops in Western Canada in 1960 were generally above average in both yield and grade. In the spring, moisture ranged from adequate to excessive; wet fields delayed seeding in many areas, and some 1959 crops that remained in the fields over winter were not threshed until May.

The wet spring started crops off well; bumper crops were anticipated, but subsequent prolonged drought reduced average yields of grain to just above normal. Drought and heat caused some light weight grain across the southern parts of the three Prairie Provinces, and consequently some degrading; some crops that were sown late on account of the wet spring were damaged by fall frosts, particularly in the Peace River area, but exceptionally dry, mild harvest weather produced higher average grades than in several years. Broken kernels, the result of low moisture content, was a significant grading factor in many districts.

It was estimated that about 95% of the 1960 red spring wheat in Manitoba and Saskatchewan, and about 70% in Alberta, would qualify for Manitoba No. 3 Northern or higher grade. Similarly, amber durum wheat was generally No. 3 Canada Western or higher; blackpoint and smudge were the main reasons for durums not qualifying for No. 1 Canada Western generally. Thin kernels, from the drier southern areas, were conspicuous in the small amount of low grade that was harvested.

In the drier southern districts much of the barley had thin kernels, and frosts damaged some of this grain in the Peace River area, but a high proportion of the barley crop qualified for "malting" grades—No. 3 Canada Western and higher.

1960 crop oats generally had good test weight per bushel, and the fine fall weather produced good supplies of high grade, millers' quality of oats. The average quality of rye was good; No. 2 Canada Western was by far the predominating grade.

Flaxseed was generally No. 1 Canada Western, except for some light weight seed from the drier areas. Rapeseed production was estimated at more than three times over 1959, production having been stimulated by an increased overseas demand for this oil seed; drought in some southern districts, and frost in Northern Alberta did some damage, but most of this crop qualified for the top grade of Canada Rapeseed. The brisk overseas market sparked an unusually heavy fall movement of rapeseed; it was estimated that about 75% of the crop had been delivered from farms by mid-November.

Production of domestic mustard seed increased substantially in Southern Alberta in 1960; most of the crop qualified for No. 1 Canada Western, with the Oriental type predominating.

In the Lethbridge area there were about 7,400 acres of safflower seed and over 1,000 acres of pea beans. Both produced high grade crops; the colour of the beans was exceptionally good and the incidence of damage was quite low.

Research Laboratory

The Laboratory provided information on the quality of 1960 western grain and on grain marketed during the 1959-60 crop year for presentation at the October meeting of the Committee on Western Grain Standards and subsequent publication in maps and bulletins. Quarterly bulletins on the quality of cargoes of Red Spring and Amber Durum wheats were continued; with the beginning of the 1960-61 crop year, these two bulletins have been published with text and table headings in French, German and Spanish, as well as English.

Amongst many services provided to the Inspection Branch, assistance in the control of grain drying was of major importance this year; further simplification of test methods and general procedure resulted in improved control under difficult circumstances caused by the high initial moisture content of much of the grain. The Laboratory continued its co-operation with the Canadian Wheat Board, Trade Commissioners, and others involved in merchandising Canadian grain. Studies of new varieties were undertaken as usual in collaboration with the Department of Agriculture. Basic and Applied research projects completed during the year have been reported in 13 papers published or in press in scientific journals. Difficulties are still being experienced in recruiting professional staff to fill vacancies in research sections.

The Director of the Laboratory accompanied the Chief Commissioner on a mission to Japan and Hong Kong, and subsequently visited Australia and New Zealand. Earlier in the year, he attended cereal conferences in Austria, Norway and the Netherlands, and special meetings in Switzerland. Dr. G. N. Irvine represented the Board at the Netherlands Bakery Foundation Exhibition in Amsterdam, and visited Germany and the United Kingdom. Further studies of markets and of grain handling and processing were made during these tours.

Appendix F provides a summarized account of work undertaken by the Laboratory. More complete and detailed information will be published in the Laboratory's Annual Report for 1960.

Weighing of Grain

The staff of the Board's Weighing Branch provided usual weighing services at licensed elevators and investigated complaints relating to reports of excessive outturn shortages on carlot and cargo shipments. The Board's scale inspector carried out periodic tests and inspections of scales at licensed

terminal and eastern elevators, and made special inspections when such were considered necessary. Further detailed information in regard to the work of this Branch is given in Appendix E.

Weighover of Stocks, Terminal and Eastern Elevators

In accordance with the provisions of Sections 139 and 140 of the Canada Grain Act, 25 terminal and 20 eastern elevators were weighed over during the 1959-60 crop year by members of the Board's Weighing and Inspection staffs.

Deferments into the following crop year were made at 11 terminal elevators at the Lakehead, 9 terminal elevators at other points, and at 8 eastern elevators. The Board found it necessary to grant these deferments to avoid delaying the handling and loading of grain required to meet export orders. However, it was possible to carry out eight of these deferred weighovers before the end of December, 1960.

Tables C-12 to C-14 of Appendix C contain the results of weighovers carried out in the 1959-60 crop year.

Entomological Investigations

To protect Canadian grain in storage from losses by insects and other grain pests, a regular program of inspection of terminal elevator premises and grain stocks was carried out during 1960. Most of the terminal elevators were visited at least once during the season. The elevators in the Bay Port and the St. Lawrence River area were examined on three occasions. One trip was made to the Pacific Coast area. Discussions were held on each visit with the management on the conditions existing and when necessary, instructions were issued on control.

In general, the terminal elevators were reasonably free from insect pests. During the seasons of 1959 and 1960 a stepped-up program on the Pacific Coast has resulted in a marked improvement in most of the elevators in that area.

A visit was made to the new Cargill grain elevator at Baie Comeau in July. As it had just been placed in operation a short time previously, it was too early to determine whether the structural features will pose any special insect problems.

The second season of operation of the St. Lawrence Seaway still leaves some questions as to the future grain handling patterns. As in 1959 a considerable amount of United States grain is being handled for export through Canadian elevators. Further checking has been carried out of United States grain in store in Canadian elevators to determine its freedom from insect pests. One lot of United States corn was found to be infested and was fumigated at the time of unloading. In another case the elevator declined to take an infested cargo.

Some infestation has been found in Canadian Eastern wheat and one parcel was fumigated.

All of the Canadian Government Elevators have been very carefully examined during the past three years. Grain is stored for long periods of time particularly in the interior ones. Large representative samples were drawn from the bottom of all bins and examined for insect infestation.

Two short courses for grain elevator personnel are planned for early in 1961 at Montreal, Quebec and Toronto, Ontario. Because of the changing personnel in the terminal elevators there has been a strong demand from the

management of the terminals for these courses both for new employees and as a "refresher" for older ones. This educational work by the Board is greatly appreciated by the grain trade.

Close contact has been maintained with the various grain inspection offices of the Board by regular visits through the season to discuss insect control with the staff.

The Board's entomologist, Dr. H. E. Gray, has maintained contact with the grain and milling trade through attendance at the Annual Convention of the American Association of Operative Millers in St. Louis, Mo., in May.

Close liaison has been maintained throughout the year with the Plant Protection Division of the Department of Agriculture on matters relating to grain storage and grain-infesting insects.

Terminal and Eastern Complaints

During 1960, the Board directed the investigation of 44 complaints relating to reports of excessive outturn shortages on shipments to Eastern Canadian points. Included were 35 on vessel shipments from Fort William and Port Arthur, 4 on vessel shipments from Eastern transfer ports, 3 on vessel shipments from other ports, and 2 on truck and carlot shipments.

These complaints were disposed of as follows:

No cause of reported discrepancy found.....	16
Settlement effected.....	24
Not yet disposed of.....	4
TOTAL.....	44

Complaints on Export Shipments

A total of 65 complaints relating to shipments to overseas destinations were dealt with by the Board and its officials during 1960. Of this number, 25 concerned outturn weights reported from overseas, and 40 referred to some aspect of the quality of grain cargoes.

Disposition was as follows:

	Quality	Weight
No cause of reported discrepancy found.....	—	21
No grounds for complaint.....	39	—
Settlement effected.....	—	1
Complaint withdrawn.....	—	1
Not yet disposed of.....	1	2
TOTALS.....	40	25

Statistics

Statistics relating to Canadian grain movement collected and compiled by the Board's Statistics Branch are presented in Appendix C of this report.

Information Program

The Board's mobile exhibit was placed on display at 12 agricultural fairs in Manitoba and Saskatchewan during 1960. The exhibit featured samples of various types and qualities of grain, with special emphasis on malting barley, and included a working model of an automatic sampler, a device used at terminal elevators to take samples from a moving stream of grain. Two of the Board's Grain Inspectors were in charge of the exhibit and discussed grain grading and other matters coming under the Board's jurisdiction, with farmers, elevator agents and superintendents and other interested visitors. A special exhibit was prepared for display at a seed show at Moose Jaw during the month of October.

The Board's offices were visited by a number of officials of the Foreign Trade service of the Department of Trade and Commerce, and by other individuals and groups from Overseas who wished to discuss matters related to the grain trade and obtain first-hand information about the functions and services of the Board. Other visitors during the year included groups of country elevator agents and agriculture students.

In addition to discussions with members and officials of the Board, arrangements were made for visitors to tour the Inspection Branch, the Research Laboratory and other branches as desired; also to view the colour motion picture film "Grain Handling in Canada".

Members of the Board and senior officials again accepted a number of invitations to address annual meetings of producer organizations and to discuss topics of current interest related to the Board's work.

Canadian Government Elevators

Receipts of grain during the crop year 1959-60 at the Canadian Government Terminal Elevators operated by the Board at Moose Jaw, Saskatoon, Calgary, Edmonton, Lethbridge and Prince Rupert, were 17.4 million bushels, compared with 18.9 millions in the previous crop year. Total shipments were 18.1 millions, an increase of 1.4 millions from the corresponding figure for 1958-59.

In the fiscal year 1959-60, revenues exceeded expenditures by the amount of \$403,979.

Lake Freight Rates

On March 10, 1959, under the provisions of Section 5 of the Inland Water Freight Rates Act, the Board issued Order No. 21 which revoked Order No. 20 of September 28, 1954. This had the effect of cancelling maximum freight rates established by the Board in Order No. 20 for the carriage of grain from Fort William or Port Arthur to other specified ports in Eastern Canada.

The average rates charged during the 1960 season of navigation are given in Table C-11 of Appendix C.

Prairie Farm Assistance Act

Under provisions of Section 11 of the Prairie Farm Assistance Act the Board continued to collect the one per cent levy on grain purchased by licensees under the Canada Grain Act. During the crop year 1959-60 the amount collected was \$6,326,924.00, a decrease of \$347,074.00 from collections recorded for the previous crop year. Collections by the Board since the inception of the Act to July 31, 1960, total \$120,312,114.00.

Organization and Personnel

Two of the Board's Assistant Commissioners retired during 1960—Mr. M. M. MacKinnon, after serving in Alberta since 1947; and Mr. J. I. Hetland, after five years' service in Saskatchewan.

Mr. A. Rendfleisch and Mr. C. J. Hunt were appointed to fill the resulting vacancies, with offices at Edmonton and Regina respectively.

There were several changes in senior personnel of the Inspection Branch. Mr. C. E. S. Robertson, Grain Inspector-in-charge at Vancouver since 1949, retired after forty years of service with the Board. Mr. H. McArthur was promoted to succeed Mr. Robertson.

Mr. J. H. McLean was transferred from Calgary to Vancouver and was succeeded as Inspector-in-charge at Calgary by Mr. A. J. Goddard.

After a total of forty-eight years of service, including eleven years as Inspector-in-charge at Montreal, Mr. P. J. Smith retired and his place was taken by Mr. M. M. Ainslie, formerly on the staff of the Fort William Inspection Office.

As a further step in a program of re-organization, the Registration Branch became a division of the Statistics Branch.

At December 31, 1960, the Board's staff totalled 910 as compared with 912 at the end of the previous year. The staff of the Canadian Government Elevators numbered 203, indicating a reduction of 31 during the year.

A chart of the Board's organization, including further details of staff location, follows this report.

Expenditure and Revenue

Total expenditure and accrued revenue of the Board, exclusive of the Canadian Government Elevators, for the fiscal year 1959-60 compared with 1958-59 was as follows:

	1959-60	1958-59
Expenditure.....	\$4,402,576.57	\$4,471,770.15
Revenue.....	2,604,923.85	2,793,669.51

Expenditure for the nine months of the 1960-61 fiscal year to December 31, 1960, totalled \$3,151,475 as against \$2,992,012 for the comparable period during 1959-60.

Cash revenue for the same nine-month period amounted to \$1,947,624 as compared with \$1,999,170 in the previous year.

Attached hereto is a series of Appendices which outline in greater detail the work of the Board's Branches.

Respectfully submitted,

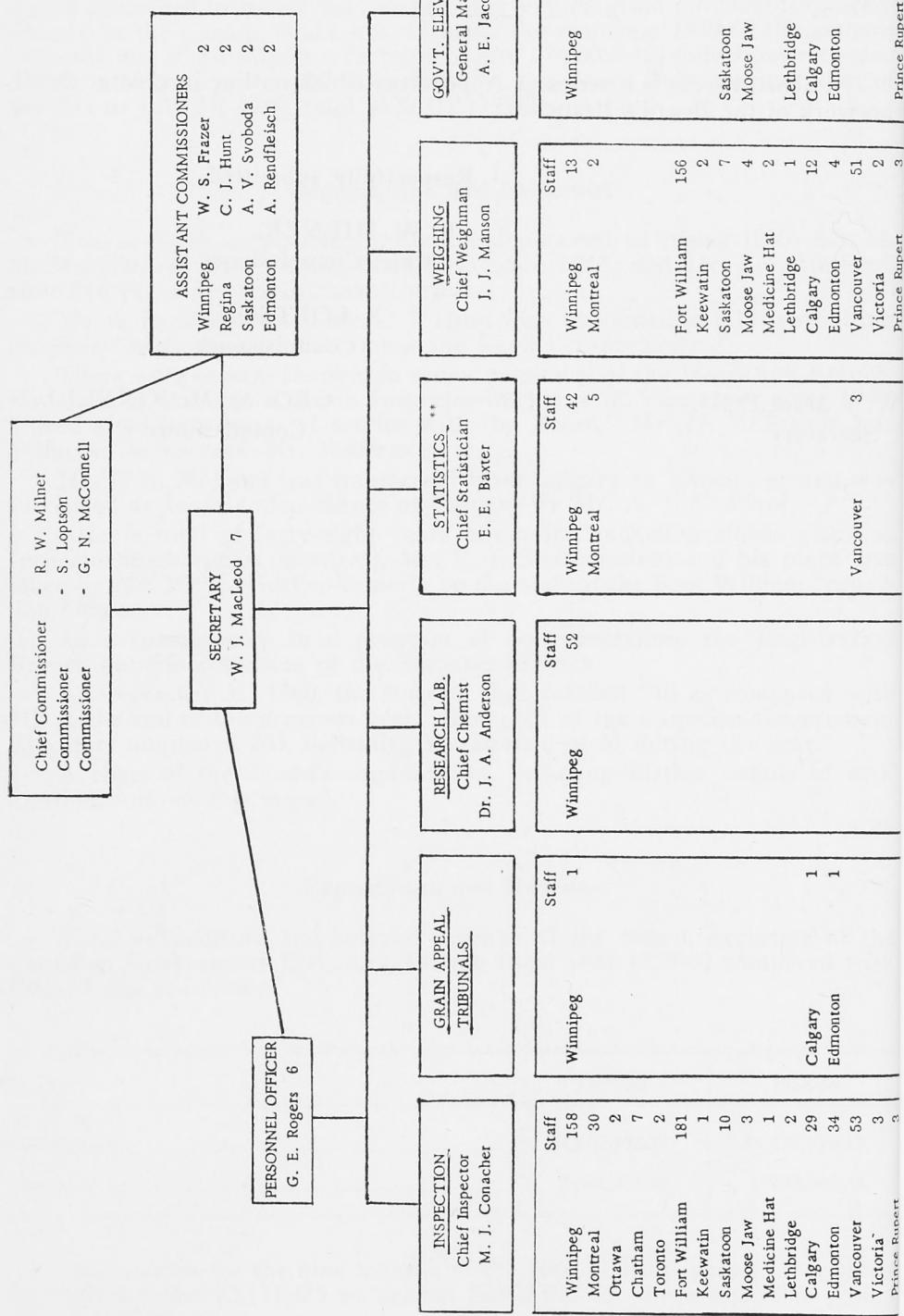
R. W. MILNER,
Chief Commissioner

S. LOPTSON,
Commissioner

W. J. MacLEOD,
Secretary

GEO. N. McCONNELL,
Commissioner

BOARD OF GRAIN COMMISSIONERS
FOR CANADA



APPENDIX A

Committee on Western Grain Standards as at December 31, 1960

R. W. Milner, Chief Commissioner, Board of Grain Commissioners.
S. Loptson, Commissioner, Board of Grain Commissioners.
G. N. McConnell, Commissioner, Board of Grain Commissioners.
M. J. Conacher, Chief Grain Inspector, Board of Grain Commissioners.
Dr. J. A. Anderson, Chief Chemist, Grain Research Laboratory.
D. E. Ross, Chairman, Grain Appeal Tribunal, Winnipeg.
R. E. Forrester, Chairman, Grain Appeal Tribunal, Calgary.
A. M. Creighton, Chairman, Grain Appeal Tribunal, Edmonton.
Dr. A. E. Hannah, Dominion Cerealist.
L. A. McCorquodale, representing the millers of wheat flour.

George Bennett
W. H. Fairfield
B. S. Plumer } Representing grain growers in Alberta.

J. H. Harrison
A. P. Gleave
J. Wellbelove
L. L. Gray
N. W. Strelloff } Representing grain growers in Saskatchewan.

W. J. Parker
P. A. McPhail
Ray Mitchell } Representing grain growers in Manitoba.

G. Constable, representing grain growers in British Columbia.
L. Bell, representing Plant Products Division, Department of Agriculture.

Committee on Eastern Grain Standards as at December 31, 1960

R. W. Milner, Chief Commissioner, Board of Grain Commissioners.
S. Loptson, Commissioner, Board of Grain Commissioners.
G. N. McConnell, Commissioner, Board of Grain Commissioners.
M. J. Conacher, Chief Grain Inspector, Board of Grain Commissioners.
W. G. Thomson, representing Montreal Board of Trade.
E. D. Sullivan, representing Toronto Board of Trade.
C. Gordon McAuley, representing exporters of grain.

F. H. Dunsford } Representing millers of wheat in the Eastern
H. Norman Davis } Division.
J. R. Heaney } Representing grain growers in Ontario.
A. McLean }

G. C. Nichols, representing growers of corn.
P. Blouin, Additional.
A. Bowman, Additional.

APPENDIX B
Grain Appeal Tribunals

Winnipeg

D. E. Ross (Chairman)
 J. E. G. Hasell
 J. F. Lazenby
 Wm. E. McLeod
 G. I. Rocan
 E. A. Sangster
 R. C. Sproule
 V. J. Stubbs
 G. A. Turner
 N. Kawka (Secretary)

Calgary

R. E. Forrester
 (Chairman)
 G. R. Deeton
 B. T. Jenkins
 W. F. Fennell
 A. E. Longhurst
 W. G. McLeod
 W. M. Pringle
 J. Tranter
 J. D. Toomer

Edmonton

A. M. Creighton
 (Chairman)
 H. A. Haggarty
 D. G. MacKeracher
 C. E. Sage
 J. F. Schofield
 T. Stickney
 N. Topolnitsky
 M. G. Wood
 C. C. Young

Toronto

C. H. Coatsworth
 J. Elder
 C. W. Heimbecker
 J. Jervis
 R. C. Pratt
 E. D. Sullivan
 A. L. Walker
 D. C. Kay, Jr. (Secretary)

Montreal

M. M. Ainslie, (Chairman)
 P. Blouin
 S. Brooks
 J. A. Byrne
 E. B. Paterson
 R. Strauss
 Mrs. Muriel B. Hunter (Secretary)

For information on Appeals of Carlot Inspections refer to Appendix D, Table D-6.

APPENDIX C

Statistics Branch

E. E. BAXTER, *Chief Statistician*

(A) STATISTICS

The Statistics Branch receives reports from all elevators licensed under the Canada Grain Act and from these returns compiles and publishes basic statistics relating to the storage and handling of grain within the Canadian elevator system. It prepares audit statements of the operations of all terminal and eastern elevators, verifies the insurance carried on grain stocks and handles the record details relating to the amounts collected as the 1% levy under the Prairie Farm Assistance Act. It supplies for review by the Board a detailed analysis of all grain handlings and co-operates with other Board offices in the maintenance of detailed records of principal operations.

(B) LICENSING

The Canada Grain Act provides that no railway company or vessel shall receive any western grain from any elevator or discharge any such grain into any elevator unless such elevator is licensed by the Board. The Act also specifies the conditions by which grain dealers, track buyers or grain commission merchants must be licensed in order to engage in contracts dealing with western grain by grade name. Such elevator and dealers' licences are issued by the Board through the licensing division of the Statistics Branch. This office also supervises the implementation of Section 79-3 by which all such licensees must be secured by bond or otherwise for the performance of all obligations imposed upon them by the Act.

(C) REGISTRATION

Section 127 of the Canada Grain Act requires the operators or managers of public terminal, semi-public terminal and eastern elevators to issue warehouse receipts or transfer receipts for all grain taken into store. Regulations No. 1 and No. 2, made by the Board under the provisions of Section 15 (22) of the Canada Grain Act, require that all such warehouse receipts or transfer receipts be registered with the Board as to grade and quantity at the time of issue, and that these warehouse receipts or transfer receipts be surrendered to the Board for registration for cancellation when the grain which they represent has been shipped out.

Introductory Comment

The office consolidation program initiated during the previous year was further developed during the 1959-60 season. Preliminary arrangements were completed towards the inclusion of Registration Branch operations effective August 1, 1960. The adaption of registration records to machine accounting techniques presents special opportunities for greater integration of office operations both within the Board and between the Board, the grain companies and the Canadian Wheat Board. This latter development will be progressive over future years but could not be initiated until this step was effected. New techniques were developed and applied to the licence issue and records, further facilitating the work of both this office and the grain companies. Included were new procedures whereby the principal public record, "Grain Elevators in Canada" was available for release shortly after the opening of

the new crop year, a publishing schedule not possible under former methods, but of considerable value to grain and transportation companies.

The introduction of a provincial crop insurance scheme in Manitoba effective with the 1960 crop necessitated certain adjustments in the records and reports covering the collection by licensees of the 1% Prairie Farm Assistance Act levy. This office worked in close co-operation with the Provincial authorities and grain company representatives towards an interim procedure for the 1960-61 season. Further discussions are scheduled regarding the development of a working system to apply as the Crop Insurance Programs are extended.

(A) Statistics

The growing use of grain statistics in the daily operation of grain companies, transportation firms and government agencies continued to be reflected in an increasing demand for both regular bulletins and special studies. The flexibility of our statistical records achieved through electronic data processing greatly facilitated the work. Of special note were the additional and earlier bulletins on the licensing position. Special studies on the terminal handlings of particular grades were of significant value to the Inspection Branch in its development of new procedures. Other studies related to terminal operations and lake shipping were carried out for the use of the Weighing Branch. The office continued to perform service operations through its machine installation for the Research Laboratory, the Personnel Division and the Accounts Branch. Close liaison was maintained with related departments of the Canadian Wheat Board and all statistical records were available for their use to avoid duplication of statistical work between the two organizations.

The office continued its collaboration with the Agriculture Division of the Dominion Bureau of Statistics in the supply of grain statistics for its related publications. Historical records were also made available to the Royal Commission on Transportation. Co-operative exchange of statistics was maintained with corresponding units of the United States Department of Agriculture, the Food and Agriculture Organization in Rome and the Commonwealth Economic Committee in London.

The responsibility of the office under provisions of the Inland Water Freight Rates Act was again of particular significance as vessel charter confirmations covering all lake grain cargoes shipped from Fort William-Port Arthur were examined and data tabulated to keep the Board advised on lake shipping charges. Charter confirmations were recorded covering 902 separate inland cargoes moving between the Canadian Lakehead and Eastern Canadian ports in vessels of Canadian and Commonwealth registry between the period April 10 to December 13.

A special review involving the refinement of policy wordings was made with respect to country elevator fire policies on grain stocks. The responsibility of the Branch under Section 102 of the Canada Grain Act was carefully discharged both in the above and in the regular examination of insurance reports and documents related to insurance coverage in country, terminal and eastern licensed storage positions.

Audit examination was conducted in connection with the weighover of 2,101 country elevators, 21 semi-public terminal elevators, 4 private terminal and 20 eastern elevators. Special statistical studies were prepared to supplement the regular audits and to further facilitate Board analysis of the accounting statements. Details of the accounting statements prepared in accordance with Sections 139 and 140 of the Canada Grain Act are summarized in Tables C-12 to C-14 inclusive, of this Appendix.

The collection of the 1% levy made under provisions of Section 11 of the Prairie Farm Assistance Act and under authority delegated to this office involved 1959-60 returns totalling \$6,326,924.00, a reduction of \$347,074.00 from levy remittances during 1958-59. The decline reflected the lighter marketing volume and a different grain and grade composition.

(B) Licensing

During the initial licensing period of the crop year 1959-60 from August 1 to December 1, 1959, 5,469 licences were issued to 97 firms and individuals. Included in these were 47 licences granted to Track Buyers, Commission Merchants and Grain Dealers. In addition, country elevator licensees were authorized to use 169 off-site grain storage buildings of various types.

In the course of the crop year twenty-one licences were cancelled, by reason that two elevators were destroyed by fire; sixteen were wrecked or dismantled; two were converted to annexes, and one application was withdrawn. Fifty-seven authorizations for grain storage buildings involving 4.2 million bushels of space were also cancelled during the crop year as the stored grain was moved to terminal positions.

Nineteen country elevator licences were suspended during renovation and reconstruction of buildings. Sixteen of these were reinstated; one was cancelled, and two, still under suspension at the end of the crop year, were not submitted for renewal at the beginning of August, 1960.

Guarantee bonds in the amount of \$30,641,275.00 executed by 13 approved surety companies were deposited with the Board as security under Section 79 of the Canada Grain Act to cover operations of licensees during 1959-60. No negotiable Government bonds were deposited in lieu of the usual form of surety bond.

As at July 31, 1960, with 5,413 elevator licences and 147 grain storage building authorities in force, the licensed storage capacity was 631,884,110 bushels in elevators and 7,170,500 bushels in grain storage buildings, a decrease in the total licensed storage capacity of 2,891,640 bushels since July 31, 1959. The total licensed storage capacities by provinces are: Manitoba, 59.1; Saskatchewan, 208.3; Alberta, 137.2; British Columbia, 28.0; Ontario, 154.1; Quebec, 45.2, and the Maritimes, 7.2 million bushels.

The major changes in the composition of this storage were reductions of 16.1 million bushels in country elevator storage and 4.2 millions in grain storage building capacity, and the increase of 17.4 millions in terminal and eastern elevator facilities including the construction of a complete new elevator at Baie Comeau.

(C) Registration

Due, primarily, to the very large quantities of damp and tough grain that were received by semi-public terminal elevators to allow for artificial drying of the grain to prevent spoilage, the offices in the Western Division experienced one of the most difficult operational years in the history of the Branch. The total number of warehouse receipts submitted for registration was considerably in excess of that of other years, particularly in the case of the Lakehead group of elevators, as a separate warehouse receipt was required to be registered for each carlot of damp or tough grain received.

Calculation of the drying shrinkage was also required to be made for each carlot as it was dried and a new warehouse receipt registered for the dried weight. The total number of warehouse receipts handled through these offices exceeded that of 1951-52, the previous record crop year but, due to experience gained in that year, plus improved operational procedures, service was maintained at proper levels without increase in staff.

Records were kept for each licensee in both the Eastern and Western Divisions, by grade, showing the total quantities registered, cancelled and outstanding each day with a breakdown of this data to provide total receipts, shipments, natural and artificial drying and grade adjustments for the crop year. A separate series of records also maintained for each licensee provided a complete registration and cancellation record of all warehouse receipts or transfer receipts that were issued. Grade adjustments, as reported daily by the licensees of semi-public terminal elevators, were carefully scrutinized to see that they conformed to the non-mixing provisions of the Canada Grain Act. Certified statements of outstanding warehouse receipt and transfer receipt grade totals together with the total handlings of the non-mixing grades of wheat and other relevant information, were supplied as required for use in summarizing the results of the annual weighover of stocks of grain as carried out by Board officials at terminal and Eastern elevators.

Registration service was also provided to licensees of elevators in the Western Division for warehouse receipts that were required to be split, consolidated, re-issued or adjusted for grade to facilitate documentation in connection with the handling of the grain.

While the total number of warehouse receipts submitted for registration during the year increased materially, the total handlings of primary receipts and shipments at these elevators, for the crop year 1959-60, shows a decline when compared to the ten-year average at all points except Vancouver.

Fees for registration service were charged at the rate of 4 cents a thousand bushels for registration and for registration for cancellation in the Western Division, and one cent a thousand bushels for registration and for registration for cancellation in the Eastern Division. The overall decrease in handlings of primary receipts and shipments is reflected in the total fees collected for the period under review of \$44,942.56 as compared to the ten-year average of \$49,533.05.

General

Summary grain statistics with respect to the 1959-60 crop year and the 1960 season of navigation are presented in table form following this section. Complete details are published in the various regular and periodical bulletins of the Branch, in the Branch's export release, "Canadian Grain Exports 1959-60", and in the "Grain Trade of Canada" issued jointly by this office and the Agriculture Division of the Dominion Bureau of Statistics. Details of licences issued under the Canada Grain Act are carried in the publication "Grain Elevators in Canada". Table C-19 of this Appendix presents the total bushels, by grains, for which warehouse receipts or transfer receipts were registered and/or registered for cancellation at offices of the Board maintained for this purpose at Montreal, Winnipeg and Vancouver.

Table C-1.—Supply and Disposition of Canadian Grain, Crop Year 1959-60

	Wheat	Oats	Barley	Rye	Flaxseed
	bu.	bu.	bu.	bu.	bu.
SUPPLY					
Carry-over July 31st, 1959.....	549,001,464	118,978,700	128,153,215	7,919,805	6,523,126
Production in 1959.....	413,520,000	417,933,000	225,550,000	8,149,000	17,719,000
Total Supply.....	962,521,464	536,911,700	353,703,215	16,068,805	24,242,126
DISPOSITION					
Exported Overseas.....	270,044,404	4,520,484	44,166,719	451,913	12,494,273
Exported to U.S.A.....	2,087,750	1,103,771	13,525,895	4,062,776	—
Consumed in Canada.....	152,801,174	438,459,953	174,540,951	4,800,725	6,873,461
Total Disposition.....	424,933,328	444,084,208	232,233,565	9,315,414	19,367,734
CARRY-OVER (July 31st, 1960)					
On Farms (Estimated).....	81,700,000	72,000,000	63,000,000	3,800,000	810,000
In Country, Private Terminal and Mill Elevators.....	268,279,153	15,938,212	44,773,532	1,894,554	1,221,530
In Semi-Public Terminal Elevators.....	84,020,771	1,436,889	8,698,409	525,254	1,575,240
In Store at and Afloat to Eastern Elevators.....	80,369,247	2,056,575	2,434,639	141,679	904,321
In Eastern Flour Mills.....	2,485,085	195,067	25,095	—	—
In Transit by Rail—Eastern and Western Divisions.....	20,733,880	1,200,749	2,537,975	220,153	363,301
In Store and in Transit to the United States.....	—	—	—	171,751	—
Total in Store July 31st, 1960....	537,588,136	92,827,492	121,469,650	6,753,391	4,874,392

Table C-2.—Production and Producers' Marketings in Western Canada,
by Provinces, Crop Year 1959-60

	Wheat	Oats	Barley	Rye	Flaxseed
	bu.	bu.	bu.	bu.	bu.
PRODUCTION (DBS Estimate)					
Manitoba.....	60,000,000	61,000,000	35,000,000	1,660,000	4,600,000
Saskatchewan.....	232,000,000	94,000,000	74,000,000	3,000,000	6,300,000
Alberta and British Columbia.....	108,165,000	112,400,000	111,636,000	1,741,000	6,711,000
Totals.....	400,165,000	267,400,000	220,636,000	6,401,000	17,611,000
PRODUCERS' MARKETINGS					
(a) At Country Elevators					
Manitoba.....	48,155,509	7,212,110	17,752,572	1,075,888	3,246,308
Saskatchewan.....	235,215,202	8,035,333	35,396,702	2,219,567	5,094,395
Alberta.....	91,696,686	8,533,026	42,052,641	982,029	5,223,983
Totals.....	375,067,397	23,780,469	95,201,915	4,277,484	13,564,686
(b) At Interior Semi-Public Terminals					
Manitoba.....	53,411	16,875	14,845	—	—
Saskatchewan.....	—	—	—	—	—
Alberta.....	117,351	23,168	31,558	—	744
Totals.....	170,762	40,043	46,403	—	744
(c) At Interior Private and Mill Elevators					
Manitoba.....	207,911	42,895	85,381	—	92,997
Saskatchewan.....	1,839,458	113,270	73,135	224	116,933
Alberta.....	1,187,983	347,822	110,594	10,122	167,184
Totals.....	3,235,352	503,987	269,110	10,346	377,114
(d) Loaded over Platforms					
Manitoba.....	3,565	13,982	2,516	1,607	2,726
Saskatchewan.....	30,436	—	1,876	1,684	1,373
Alberta.....	6,443	—	69,001	—	13,985
Totals.....	40,444	13,982	73,393	3,291	18,084
Total Producers' Marketings					
Manitoba.....	48,420,396	7,285,862	17,855,314	1,077,495	3,342,031
Saskatchewan.....	237,085,096	8,148,603	35,471,713	2,221,475	5,212,701
Alberta.....	93,008,463	8,904,016	42,263,794	992,151	5,405,896
Totals.....	378,513,955	24,338,481	95,590,821	4,291,121	13,960,628

Table C-3.—Receipts and Shipments of Canadian Grain at Terminals, Crop Year 1959-60

	Wheat	Oats	Barley	Rye	Flaxseed
	bu.	bu.	bu.	bu.	bu.
Fort William-Port Arthur—					
Receipts.....	201,982,753	26,306,137	59,534,766	3,901,524	7,988,815
Shipments.....	188,384,940	31,157,056	64,183,759	4,111,394	7,490,501
Vancouver-New Westminster—					
Receipts.....	92,045,092	2,681,272	23,237,523	369,366	5,986,018
Shipments.....	92,865,941	3,421,147	23,255,372	326,984	6,296,049
Victoria—					
Receipts.....	3,042,523	554	207	283	422,474
Shipments.....	2,859,621	17,965	2,802	—	444,083
Prince Rupert—					
Receipts.....	—	—	9,535,127	—	—
Shipments.....	—	—	8,896,325	—	—
Churchill—					
Receipts.....	21,792,231	1,110	—	—	—
Shipments.....	21,700,046	175,953	—	—	—
Transcona—					
Receipts.....	112,492	23,182	26,555	4,045	660
Shipments.....	80,084	56,561	35,311	4,045	660
Calgary—					
Receipts.....	1,573,702	—	1,990,623	—	5,468
Shipments.....	1,544,208	6,477	2,071,605	—	5,468
Edmonton—					
Receipts.....	1,952,205	45,926	47,142	—	4,530
Shipments.....	2,289,058	63,521	39,816	—	4,174
Lethbridge—					
Receipts.....	352,864	—	—	1,664	30,089
Shipments.....	281,712	—	—	1,664	30,089
Moose Jaw—					
Receipts.....	7,600	151,046	2,058	1,604	1,422
Shipments.....	28,123	151,046	2,058	1,604	1,422
Saskatoon—					
Receipts.....	253,093	45,182	—	—	35,467
Shipments.....	1,061,183	11,059	—	—	34,838
Total Receipts.....	323,114,555	29,254,409	94,374,001	4,278,486	14,474,943
Total Shipments.....	311,094,916	35,060,785	98,487,048	4,445,691	14,307,284

Table C-4.—Shipments of Foreign Grain From Canadian Elevators into Canadian Consumer Channels, Crop Year 1959-60

From	United States Flaxseed	United States Corn	United States Soybeans	South African Corn
	bu.	bu.	bu.	bu.
Eastern Elevators.....	98,571	7,637,186	2,159,312	49,803
Fort William-Port Arthur.....	—	—	—	—
Interior Terminals.....	—	—	—	—
Interior Private and Mill Elevators.....	—	888,036	—	—
Pacific Coast Elevators.....	—	—	—	—

Table C-5.—Primary Receipts and Shipments at Eastern Elevators, Crop Year 1959-60

	Receipts	Shipments
CANADIAN GRAIN	bu.	bu.
Wheat.....	182,601,602	165,208,357
Oats.....	30,048,152	31,012,488
Barley.....	33,375,622	34,224,344
Rye.....	1,158,825	1,226,365
Flaxseed.....	5,739,430	5,954,548
Corn.....	2,509,125	2,376,888
Soybeans.....	3,385,320	3,268,331
Buckwheat.....	85,041	81,773
Peas.....	112,706	109,200
Rapeseed (lbs.).....	2,045,360	2,045,360
Mixed Grain (lbs.).....	2,221,392	570,000
Sample Grain (lbs.).....	17,117,093	15,901,262
UNITED STATES GRAIN		
Wheat.....	4,341,170	4,376,193
Oats.....	360,126	357,160
Barley.....	1,141,046	1,198,021
Rye.....	612,566	612,566
Flaxseed.....	1,235,077	1,432,641
Corn.....	19,113,884	18,606,563
Soybeans.....	6,084,543	5,495,205
Mixed Grain (lbs.).....	3,965,450	3,965,450
FOREIGN GRAIN		
South African Corn.....	—	49,803

Table C-6.—Supply and Disposition of Canadian Grain in United States Positions, Crop Year 1959-60

	Wheat	Oats	Barley	Rye	Flaxseed
SUPPLY	bu.	bu.	bu.	bu.	bu.
In Store and in Transit U.S.A.....	159,089	—	—	—	—
Receipts direct from Canada.....	2,810,856	1,103,771	13,525,895	4,214,776	—
Total Supply.....	2,969,945	1,103,771	13,525,895	4,214,776	—
DISPOSITION					
Exported.....	136,788	—	—	—	—
Returned to Canada.....	745,407	—	—	—	—
Used Domestically.....	2,087,750	1,103,771	13,525,895	4,062,776	—
Total Disposition.....	2,969,945	1,103,771	13,525,895	4,062,776	—
In Store and in Transit July 31, 1960	—	—	—	152,000	—

Table C-7—Exports of Canadian Wheat, by Seaboard Sectors, by Months, Crop Year 1959-60

	Via Canadian Pacific Ports	Via Canadian St. Lawrence- Atlantic Ports	Via Churchill	Via Fort William- Port Arthur Direct	Via United States Atlantic Ports	United States Imports ¹		Total All Wheat	Wheat Flour ²	Total Wheat and Wheat Flour
						For Domestic Use	Milling in Bond			
1959	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.
August.....	6,979,151	5,783,555	8,096,226	334,285	—	10,100	21,203,317	3,194,429	24,397,746	
September.....	6,862,447	5,091,949	9,368,759	1,041,067	—	131,751	22,605,973	3,547,338	26,153,311	
October.....	6,027,459	11,433,133	3,693,727	1,186,818	—	99,180	22,440,317	3,059,255	25,499,572	
November.....	7,977,540	19,981,155	—	1,196,652	—	83,346	29,238,693	3,312,361	32,551,054	
December.....	7,550,262	12,540,967	—	—	136,788	34,456	20,262,473	3,558,579	23,821,052	
1960										
January.....	7,150,150	6,056,821	—	—	—	12,729	—	13,219,700	3,076,181	16,295,881
February.....	10,986,416	5,470,615	—	—	—	5,000	—	16,462,031	2,617,345	19,079,376
March.....	7,707,655	7,375,023	—	—	—	19,067	—	17,101,745	2,616,820	19,718,565
April.....	4,776,360	10,260,307	—	—	—	29,497	—	15,372,721	2,507,619	17,880,340
May.....	8,384,979	9,545,702	—	—	—	1,183,600	119,000	21,209,951	3,840,963	25,050,914
June.....	10,472,560	9,880,367	—	—	—	99,190	—	21,010,991	2,465,765	23,476,756
July.....	8,193,014	4,981,127	541,333	722,797	—	150,834	—	14,589,105	3,618,482	18,207,587
Total Crop Year 1959-60.....	95,067,993	108,400,721	21,700,045	7,323,720	136,788	1,858,750	229,000	234,717,017	37,415,137	272,132,154
Total Crop Year 1958-59.....	106,547,195	118,857,043	18,409,322	4,979,236	—	1,953,931	1,408,216	252,154,943	37,124,914 ³	289,279,857
5-Year Average 1954-55 to 1958-59.....	103,711,531	121,183,272	15,623,725	1,028,262	148,638	4,366,810	1,252,518	247,314,756	38,333,378	285,648,134

¹ Compiled from returns of Canadian elevator licensees and shippers and advice from American grain correspondents.

² Canadian Customs returns converted to bushels—unadjusted for time lag.

³ Revised—adjusted to remove effect of time lag in reports made by the Customs.

Table C-8—Overseas Exports of Canadian Grain, by Seaboard Sectors,
by Grades, Crop Year 1959-60

Grades	Via Canadian Pacific Ports	Via Canadian St. Lawrence- Atlantic ¹ Ports	Via Churchill	Via Ft. William- Port Arthur direct	Via United States Atlantic Ports	Total
	bu.	bu.	bu.	bu.	bu.	bu.
WHEAT—						
1 Manitoba Northern.....	1,716,108	995,404	93,333	—	—	2,804,845
2 Manitoba Northern.....	21,416,688	33,054,763	11,930,737	2,688,305	—	69,100,493
3 Manitoba Northern.....	34,483,081	33,357,770	8,076,222	2,302,300	—	78,219,373
4 Manitoba Northern.....	26,488,026	12,072,998	1,144,775	664,658	—	40,507,245 ²
No. 5.....	9,493,860	4,002,918	277,336	—	—	13,774,114
Garnet.....	162,629	—	—	—	—	162,629
Alberta Winter.....	558,134	—	—	—	—	558,134
Other Western.....	749,467	1,611,225	177,642	1,123,018	—	3,661,352
Eastern.....	—	1,318	—	—	—	1,318
2 C.W. Amber Durum.....	—	6,075,835	—	304,566	—	6,380,401
3 C.W. Amber Durum.....	—	8,033,481	—	37,334	—	8,070,815
Ex 4 C.W. Amber Durum.....	—	5,642,479	—	143,699	—	5,786,178
4 C.W. Amber Durum.....	—	3,533,863	—	49,840	—	3,583,703
5 C.W. Amber Durum.....	—	18,667	—	—	—	18,667
Totals.....	95,067,993	108,400,721	21,700,045	7,323,720	—	232,629,267²
OATS—						
3 C.W.....	—	8,235	—	—	—	8,235
Ex. 1 Feed.....	939,516	133,574	—	119,114	—	1,192,204
1 Feed.....	1,528,653	40,706	—	111,474	—	1,680,833
Mixed Feed.....	265,900	944,015	138,353	197,647	—	1,545,915
Eastern.....	—	93,297	—	—	—	93,297
Totals.....	2,734,069	1,219,827	138,353	428,235	—	4,520,484
BARLEY—						
2 C.W. Six Row.....	91,666	—	—	—	—	91,666
3 C.W. Six Row.....	2,135,992	35,000	—	384,069	—	2,555,061
4 C.W. Six Row.....	451,773	144,312	—	—	—	596,085
2 C.W. Two Row.....	81,067	—	—	—	—	81,067
3 C.W. Two Row.....	5,837,827	—	—	—	—	5,837,827
1 Feed.....	20,688,686	571,973	—	—	—	21,270,659
2 Feed.....	2,554,617	4,196,945	—	6,882,995	—	13,634,557
3 Feed.....	—	41,464	—	—	—	41,464
Other Western.....	—	58,333	—	—	—	58,333
Totals.....	31,851,628	5,048,027	—	7,267,064	—	44,166,719
RYE—						
2 C.W.....	312,134	139,779	—	—	—	451,913
Totals.....	312,134	139,779	—	—	—	451,913
FLAXSEED—						
1 C.W.....	6,504,978	2,515,913	—	1,344,505	—	10,365,396
2 C.W.....	210,369	1,194,268	—	388,940	—	1,793,577
3 C.W.....	74,143	201,157	—	60,000	—	335,300
Totals.....	6,789,490	3,911,338	—	1,793,445	—	12,494,273

¹ Includes clearances of wheat direct overseas from Sarnia, Ontario.

² Includes 136,788 bushels 4 Manitoba Northern shipped from U.S.A. Lake Ports.

Table C-9—Overseas Exports of Canadian Grain, by Ports, Crop Year 1959-60

Loaded at	Wheat (All varieties)	Oats	Barley	Rye	Flaxseed	Total All Grains
	bu.	bu.	bu.	bu.	bu.	bu.
Vancouver-New Westminster.....	92,246,198	2,719,180	22,956,224	312,134	6,344,320	124,578,056
Victoria.....	2,821,795	14,889	—	—	445,170	3,281,854
Prince Rupert.....	—	—	8,895,404	—	—	8,895,404
Churchill.....	21,700,045	—	—	—	—	21,700,045
Fort William-Port Arthur direct.....	7,323,720	138,353	—	—	—	7,323,398
Sarnia.....	428,235	—	7,267,064	—	—	7,267,064
Montreal.....	106,400	—	—	—	1,793,445	16,812,464
Sorel.....	48,341,600	1,055,034	3,204,010	89,856	3,351,467	106,400
Three Rivers.....	16,841,766	—	116,940	—	—	56,041,967
Quebec.....	11,432,086	—	244,677	—	—	16,958,706
Baie Comeau.....	7,021,545	—	1,482,400	—	—	11,676,763
Saint John.....	332,470	—	—	—	—	8,503,945
West Saint John.....	1,829,735	—	—	—	—	332,470
Halifax.....	12,553,269	164,793	—	49,923	559,871	1,829,735
9,941,850	—	—	—	—	—	13,327,856
Totals—Canadian Ports.....	232,492,479	4,520,484	44,166,719	451,913	12,494,273	294,125,868
U.S.A. Ports.....	136,788	—	—	—	—	136,788
Totals to Overseas.....	232,629,267	4,520,484	44,166,719	451,913	12,494,273	294,262,656
Wheat Flour ¹	37,415,137	—	—	—	—	37,415,137
U.S.A. Imports ²	2,087,750	1,103,771	13,525,895	4,062,776	—	20,780,192
Grand Totals.....	272,132,154	5,624,255	57,692,614	4,514,689	12,494,273	352,457,985

¹ Canadian Customs Returns—converted to bushels.² Compiled from returns of Canadian Elevator licensees and shippers and advice from American grain correspondents.

Table C-10—Tough and Damp Grain Dried, by Storage Position, Crop Year 1959-60

	Artificial Drying			Natural Drying	Total
	Tough	Damp	Tough and Damp		
LAKEHEAD					
Wheat.....	bu.	bu.	bu.	bu.	bu.
11,835,869	14,170,340	26,006,209	11,803,198	37,809,407	
Durum.....	72,921	257,806	330,727	213,679	544,406
Oats.....	165,057	405,608	570,665	533,436	1,104,101
Barley.....	291,533	1,043,132	1,334,665	2,227,751	3,562,416
Rye.....	6,028	19,876	25,904	86,452	112,356
Flaxseed.....	923,953	1,133,221	2,057,174	528,264	2,585,438
Totals.....	13,295,361	17,029,983	30,325,344	15,392,780	45,718,124
PACIFIC COAST					
Wheat.....	12,082,872	5,151,689	17,234,561	4,601,616	21,836,177
Oats.....	77,093	19,524	96,617	306,906	403,523
Barley.....	1,920,948	986,857	2,907,805	2,213,795	5,121,600
Rye.....	—	—	—	27,500	27,500
Flaxseed.....	17,237	15,068	32,305	515,298	547,603
Totals.....	14,098,150	6,173,138	20,271,288	7,665,115	27,936,403
INTERIOR					
Wheat.....	860,581	1,864,896	2,725,477	—	2,725,477
Oats.....	97	5,677	5,774	—	5,774
Barley.....	—	3,748	3,748	—	3,748
Flaxseed.....	—	5,158	5,158	—	5,158
Totals.....	860,678	1,879,479	2,740,157	—	2,740,157
CHURCHILL					
Wheat.....	—	—	—	237,348	237,348
Totals, All Positions.....	28,254,189	25,082,600	53,336,789	23,295,243	76,632,032

Table C-11—Weighted Average Lake Freight Rates on Canadian Grain from Fort William-Port Arthur, Season of Navigation 1960

Port of Discharge	Wheat	Oats	Barley	Rye	Flaxseed
Georgian Bay Ports, Goderich, Sarnia and Walkerville.....	5.045	4.679	5.022	5.477	—
Port Colborne.....	6.5	6.0	6.358	6.5	—
Toronto.....	7.0	6.5	7.163	7.0	7.5
Kingston.....	7.75	7.0	7.25	—	—
Prescott.....	8.015	7.25	7.524	—	—
Montreal (Direct).....	13.0	10.113	12.460	13.0	14.0
Montreal via Port Colborne.....	14.084	—	—	—	—
Montreal via Toronto.....	14.0	—	—	—	—
Montreal via Kingston.....	14.0	10.867	12.316	14.0	14.313
Montreal via Prescott.....	13.627	10.5	12.5	—	14.631
Sorel (Direct).....	13.0	10.0	12.3	—	—
Sorel via Port Colborne.....	14.0	—	—	—	—
Sorel via Kingston.....	14.0	—	—	—	—
Sorel via Prescott.....	14.0	—	—	—	—
Three Rivers (Direct).....	13.0	10.105	12.405	—	—
Three Rivers via Bay Ports.....	14.0	—	—	—	—
Three Rivers via Port Colborne.....	14.0	—	—	—	—
Three Rivers via Toronto.....	14.0	—	—	—	—
Quebec (Direct).....	13.0	10.037	12.330	—	—
Quebec via Kingston.....	—	10.5	—	—	—
Baie Comeau.....	13.0	—	—	—	—
Baie Comeau via Port Colborne.....	14.0	—	—	—	—
Halifax.....	17.678	17.0	18.312	18.5	—
Port Williams.....	30.0	22.0	25.0	—	—
Point du Chene.....	19.0	17.5	18.0	—	—
Buffalo.....	8.0	7.5	7.766	8.0	—
Chicago.....	7.367	—	6.294	6.641	—
Duluth-Superior.....	5.645	—	5.262	—	—
Manitowoc.....	—	—	6.550	—	—
Milwaukee.....	6.632	—	6.414	6.5	—
Oswego.....	—	—	9.0	—	—

Note—Rates originally quoted in United States Funds have been converted to Canadian currency at the prevailing rates of exchange.

Table C-12.—Excesses and Deficiencies in Specified Grades of Wheat Disclosed by Weighovers of Grain Stored in SEMI-PUBLIC TERMINAL Elevators, Crop Year 1959-60

Date of Weighover	Licensee	EXCESS						DEFICIENCY					
		No. 1 Manitoba Hard	No. 1 Manitoba Northern	No. 2 Manitoba Northern	No. 3 Manitoba Northern	No. 1 Canada Western Garnet	No. 2 Canada Western Garnet	No. 1 Manitoba Hard	No. 1 Manitoba Northern	No. 2 Manitoba Northern	No. 3 Manitoba Northern	No. 1 Canada Western Garnet	No. 2 Canada Western Garnet
		bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.
Dec. 28, 1959-	Four William-Port Arthur The Fort William Elevator Co. Ltd.	—	—	—	—	—	—	—	—	—	—	—	—
Jan. 5, 1960-----	Empire-----	—	—	—	—	—	—	—	—	—	—	—	—
Dec. 14-21, 1959-----	Elevator "E",-----	—	—	—	—	—	—	—	—	—	—	—	—
Dec. 15-18, 1959-----	Lakehead Terminals Ltd.-----	—	—	—	—	—	—	—	—	—	—	—	—
Jan. 11-15, 1960-----	Manitoba Pool Elevators Elevator No. 1-----	—	—	—	—	—	—	—	—	—	—	—	—
Dec. 14-17, 1959-----	McCabe Grain Co. Ltd.-----	304.9	—	—	—	—	—	—	—	—	—	—	—
Dec. 15-23, 1959-----	National Grain Co. Ltd.-----	—	—	—	—	—	—	—	—	—	—	—	—
Nov. 9-13, 1959-----	Ogilvie Flour Mills Co. Ltd.-----	—	—	—	—	—	—	—	—	—	—	—	—
Dec. 22, 1959-	Saskatchewan Wheat Pool Elevator No. 4-----	—	—	—	—	—	—	—	—	—	—	—	—
Jan. 8, 1960-----	Elevator No. 5-----	—	—	—	—	—	—	—	—	—	—	—	—
Dec. 14-23, 1959-----	Searle Grain Co. Ltd.-----	—	—	—	—	—	—	—	—	—	—	—	—
Dec. 15-18, 1959-----	Superior Elevator Co. Ltd.-----	1,140.3	1,468.5	—	—	—	—	—	—	—	—	—	—
Sept. 30- Oct. 6, 1959-----	United Grain Growers Ltd. Thunder Bay-----	—	1,048.1	923.5	—	—	—	—	—	—	—	5,407.9	—

Table C-12.—Excess and Deficiencies in Specified Grades of Wheat Disclosed by Weighovers of Grain Stored in SEMI-PUBLIC TERMINAL Elevators, Crop Year 1959-60—Continued

Date of Weighover	Licensee	EXCESS						DEFICIENCY					
		No. 1 Manitoba Hard	No. 1 Manitoba Northern	No. 2 Manitoba Northern	No. 3 Manitoba Northern	No. 1 Canada Western Garnet	No. 2 Canada Western Garnet	No. 1 Manitoba Hard	No. 1 Manitoba Northern	No. 2 Manitoba Northern	No. 3 Manitoba Northern	No. 1 Canada Western Garnet	No. 2 Canada Western Garnet
		bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.
Aug. 3-15, 1959	VANCOUVER-NEW WESTMINSTER Alberta Wheat Pool.....	—	—	—	—	—	—	—	772.1	45,899.4	46,026.9	—	—
June 27-30, 1960	Burrard Terminals Ltd.....	—	335.0	—	—	—	—	—	—	7,473.0	9,087.7	—	3,958.4
Mar. 24-31, 1960	Pacific Elevators Ltd.	—	—	—	—	—	—	—	30.1	1,919.6	1,385.9	—	—
Mar. 29- Apr. 4, 1960	Elevator No. 2..... Elevator No. 4.....	—	—	—	2,159.3	—	—	—	73.1	4,525.3	—	—	—
Sept. 4-12, 1959	United Grain Growers Ltd.	—	—	—	—	—	—	—	473.9	4,492.4	7,095.5	—	—
June 28- July 13, 1960	Elevator No. 3 (N.H.B.)..... CHURCHILL, MAN.	—	—	—	—	—	—	—	48.1	9,805.8	9,683.4	—	2,150.7
Oct. 20-24, 1959	National Harbours Board..... CALGARY, ALTA.	—	—	—	—	—	—	—	1.9	792.6	1,182.4	—	—
Aug. 24-28, 1959	Canadian Government Elevator..... EDMONTON, ALTA.	—	—	—	—	—	—	—	10.1	129.9	646.2	—	—
Aug. 13-21, 1959	Canadian Government Elevator.....	—	—	—	—	—	—	—	5.1	1,522.6	4.3	—	—

Note—United Grain Growers Ltd., Elevator A, weighed over Sept. 30-Oct. 9, 1959 to determine losses resulting from collapse of annex.

Table C-13—Excesses and Deficiencies in Specified Grades of Wheat disclosed by Weigh-overs of Grain Stored in PRIVATE TERMINAL Elevators, Crop Year 1959-60

Date of Audit, December 7, 1959	Winnipeg, Manitoba Canada Malting Co. Ltd.	
	Excess	Deficiency
No. 1 Manitoba Hard	bu.	bu.
No. 1 Manitoba Northern	—	—
No. 2 Manitoba Northern	—	15.1
No. 3 Manitoba Northern	—	20.1
No. 1 Canada Western Garnet	—	—
No. 2 Canada Western Garnet	—	—

No wheat of the above grades was handled or in store in the following elevators:

Date of Weighover	Elevator Company	Location
March 16, 1960.....	Canada Malting Co. Ltd.....	Port Arthur, Ontario
December 7, 1959.....	Dominion Malting Co. Ltd.....	Transcona, Manitoba
February 8, 1960.....	National Grain Feed Mill.....	Fort William, Ontario

Table C-14—Overages and Shortages Disclosed by Weighovers of Canada Western and Foreign Grain Stored in Eastern Elevators, Crop Year 1959-60

Date of Weighover	Licensee	Kind of Grain	Overage	Shortage
1960 Feb. 9-17	COLLINGWOOD Collingwood Terminals Ltd.....	Canada Western Wheat..... Canada Western Oats..... Canada Western Barley..... Canada Western Screenings.....	bu.	bu.
Mar. 28- Apr. 7	GODERICH Goderich Elevator and Transit Co. Ltd.....	Canada Western Wheat..... Canada Western Oats..... Canada Western Barley..... Canada Western Rye..... Canada Western Screenings..... U.S.A. Corn.....	1,735.1 997.7 485.9 *9,470	3,904.0 1,933.4 1,783.1 164.9 *68,810 663.1
Feb. 1-12	HUMBERSTONE Robin Hood Flour Mills Ltd.....	Canada Western Wheat..... Canada Western Oats..... Canada Western Barley.....	9,754.0 51.1 82.2	
Feb. 8-13	KINGSTON Canada Steamship Lines Ltd.....	Canada Western Wheat..... Canada Western Oats..... Canada Western Barley..... Canada Western Rye..... Canada Western Flaxseed..... U.S.A. Oats..... U.S.A. Barley..... U.S.A. Rye..... U.S.A. Flaxseed..... U.S.A. Corn.....	6,400.5 1,567.3 620.9 135.4 877.8 227.9 65.9 67.0 345.1 1,879.4	
May 19	LAKEFIELD Lakefield Elevator Co. Ltd.....	Canada Western Wheat.....		3,006.0
Feb. 15- Mar. 7	MIDLAND Canada Steamship Lines Ltd.....	Canada Western Wheat..... Canada Western Oats..... Canada Western Barley..... U.S.A. Corn.....	3,748.8 763.0 29.6 207.8	

Table C-14—Overages and Shortages Disclosed by Weighovers of Canada Western and Foreign Grain Stored in Eastern Elevators, Crop Year 1959-60—Continued

Table C-14—Overages and Shortages Disclosed by Weighovers of Canada Western and Foreign Grain Stored in Eastern Elevators, Crop Year 1959-60—Concluded

* Pounds.

Table C-15.—Amounts Collected and Grain Purchased under the One Per Cent Levy, Prairie Farm Assistance Act, Crop Year 1959-60

Province	Wheat	Oats	Barley	Rye	Flaxseed	Rapeseed	Total
	\$	\$	\$	\$	\$	\$	\$
Manitoba.....	655,386.75	45,860.73	149,945.64	10,032.39	98,426.02	1,844.96	961,496.48
Saskatchewan.....	3,101,317.13	50,579.36	289,156.97	19,684.66	182,668.66	28,155.18	3,671,561.96
*Alberta.....	1,145,113.50	46,579.06	323,913.11	8,611.27	162,301.15	7,347.44	1,693,865.58
Totals.....	4,901,817.38	143,019.15	763,015.72	38,328.12	443,395.83	37,347.58	6,326,923.98

*Includes Peace River area in B.C.

Penalties on late filing of returns	2.41
Total collections Aug. 1, 1959 to July 31, 1960	6,326,926.48

	GRAIN PURCHASES						
			thousands of bushels				
Manitoba.....	48,842	7,339	17,822	1,107	3,238	114	78,462
Saskatchewan.....	238,732	8,390	36,009	2,264	5,855	1,471	292,721
Alberta.....	92,889	9,044	42,195	980	5,183	367	150,658
Totals.....	380,463	24,773	96,026	4,351	14,276	1,952	521,841

Table C-16—Licences in Force and Storage Capacity as at July 31st, 1960, and a Year Ago

Kind of Licence	Licences in force July 31		Licensed storage capacity July 31	
	1960	1959	1960	1959
Country Elevators.....	5,302	5,317	361,915,800	378,071,540
Supplementary Annexes to Country Elevators.....	*	*	7,170,500	11,381,400
Terminals and Mill Elevators.....	79	80	159,533,010	158,266,010
Eastern Elevators.....	32	31	110,435,300	94,227,300
Track Buyers, Commission Merchants and Grain Dealers.....	45	49	†	†
Totals.....	5,458	5,477	639,054,610	641,946,250

* 147 buildings at July 31, 1960 and 204 buildings at July 31, 1959.

† These licences do not cover grain storage facilities.

Table C-17.—Number and Kind of Licences Issued and Licensed Storage Capacity, as at December 1st each year for the Past Five Years

Kind of Licence	1960	1959	1958	1957	1956
NUMBER OF LICENCES					
Public Country Elevator.....	5,293	5,304	5,314	5,343	5,354
Private Country Elevator.....	6	8	8	10	9
Mill Elevator.....	27	34	35	33	32
Public Terminal Elevator.....	—	—	—	—	5
Semi-Public Terminal Elevator.....	40	40	40	40	34
Private Terminal Elevator.....	5	5	5	5	5
Eastern Elevator.....	32	31	31	30	30
Track Buyer.....	18	20	22	21	21
Commission Merchant.....	21	22	24	23	23
Grain Dealer.....	6	5	5	5	5
Totals.....	5,448	5,469	5,484	5,510	5,518
LICENCED CAPACITY					
	thousands of bushels				
Public Country Elevator.....	366,636	380,838	373,357	364,661	356,263
Grain Storage Buildings.....	7,241	10,157	12,992	14,953	15,080
Private Country Elevator.....	156	232	240	369	337
Mill Elevator.....	12,794	13,637	13,671	13,513	13,451
Public Terminal Elevator.....	—	—	—	—	17,100
Semi-Public Terminal Elevator.....	139,974	138,524	137,524	137,524	118,774
Private Terminal Elevator.....	7,720	7,070	7,070	7,070	7,070
Eastern Elevator.....	110,435	97,767	94,227	94,102	94,102
Totals.....	644,956	648,225	639,081	632,192	622,177

Table C-18.—Licensed Elevators and Storage as at December 1, 1960

Kind of Elevator	Ontario	Mani- toba	Saskat- chewan	Alberta	British Colum- bia	Quebec and Mari- times	Totals
NUMBER OF ELEVATORS							
Public Country.....	3	692	2,897	1,682	19	—	5,293
Private Country.....	—	2	1	3	—	—	6
Mill.....	3	8	6	9	1	—	27
Public Terminal.....	—	—	—	—	—	—	—
Semi-Public Terminal.....	24	2	2	3	9	—	40
Private Terminal.....	2	2	—	1	—	—	5
Eastern.....	19	—	—	—	—	13	32
Totals.....	51	706	2,906	1,698	29	13	5,403
STORAGE CAPACITY							
	thousands of bushels					—	—
Public Country.....	1,660	48,818	190,293	123,764	2,101	—	366,636
†Grain Storage Buildings.....	—	—	4,464	2,777	—	—	7,241
Private Country.....	—	45	29	82	—	—	156
Mill.....	1,480	2,255	4,992	4,049	18	—	12,794
Public Terminal.....	—	—	—	—	—	—	—
Semi-Public Terminal.....	91,967	6,000	11,000	6,100	24,907	—	139,974
Private Terminal.....	2,435	3,795	—	1,490	—	—	7,720
Eastern.....	58,026	—	—	—	—	52,409	110,435
Totals.....	155,568	60,913	210,778	138,262	27,026	52,409	644,956

†Off-site storage.

Table C-19.—Warehouse Receipt Registrations for Primary and Transfer Receipts and Shipments at Semi-Public Terminal Elevators and Eastern Elevators, by Area and Grain, Crop Year 1959-60 and 10-Year Average.

Area	Grain	Crop Year 1959-60		10-Year Average, 1949-50 to 1958-59	
		Registered	Registered for Cancellation	Registered	Registered for Cancellation
		thousands of bushels			
Western Division— Winnipeg, including Lakehead and Churchill	Wheat	226,100	212,360	207,695	202,874
	Oats	26,344	31,526	66,070	67,775
	Barley	51,850	56,693	74,686	73,927
	Flax	8,065	7,568	8,956	9,388
	Rye	3,918	4,133	9,530	9,709
	Mixed Grain	158	272	726	506
	Corn	—	—	26	27
	Other Grains	31	81	151	159
Interior Elevators— Calgary, Edmonton, Lethbridge, Moose Jaw and Saskatoon	Wheat	4,252	5,284	5,760	4,459
	Oats	265	289	341	348
	Barley	2,066	2,149	1,563	1,561
	Flax	78	77	183	185
	Rye	7	7	39	40
	Mixed Grain	4	9	2	27
	Corn	4	7	15	13
	Other Grains	1,663	1,623	1,417	1,242
Vancouver and Prince Rupert Area—	Wheat	95,504	96,145	99,018	98,564
	Oats	2,711	3,475	2,415	3,392
	Barley	32,775	32,155	18,333	18,160
	Flax	6,421	6,744	1,840	1,791
	Rye	370	329	219	221
	Mixed Grain	4	2	36	47
	Corn	—	—	268	268
	Other Grains	3,447	3,531	1,615	1,602
Western Division— All Points	Wheat	325,856	313,789	312,473	305,897
	Oats	29,320	35,290	68,826	71,515
	Barley	86,691	90,997	94,582	93,648
	Flax	14,564	14,389	10,979	11,364
	Rye	4,295	4,469	9,788	9,970
	Mixed Grain	166	283	764	580
	Corn	4	7	309	308
	Other Grains	5,141	5,235	3,183	3,003
Totals—All Grains		466,037	464,459	500,904	496,285
Eastern Division—	Wheat	277,885	258,856	306,572	302,837
	Oats	32,845	33,814	44,044	44,034
	Barley	37,452	38,477	81,982	81,686
	Flax	8,225	8,615	18,767	19,110
	Rye	1,958	2,031	6,542	6,698
	Mixed Grain	512	455	548	535
	Corn	22,663	21,979	19,258	19,314
	Screenings	1,730	1,711	1,488	1,501
	Peas	113	109	119	119
	Soybeans	11,601	10,999	3,895	3,842
	Buckwheat	85	82	362	364
Totals—All Grains		395,110	377,169	484,042	480,504

APPENDIX D

Inspection Branch

M. J. CONACHER, *Chief Grain Inspector*

Under Section 32 of the Canada Grain Act, the Grain Inspection Branch in the Western Division establishes grades on carlots of grain on samples drawn during unloading by officials of the Inspection Branch at the Lakehead, Pacific Coast, Churchill, Winnipeg, Calgary, Edmonton, Moose Jaw, Saskatoon, Lethbridge and Medicine Hat. Also, all grain shipped from terminal and mill elevators is officially sampled and inspected. At the primary inspection points of Winnipeg, Calgary and Edmonton, samples placed in railway cars by country elevator agents are removed and graded; while this service does not provide official grades of these shipments, the grades established on the unofficial samples are used by the shippers and terminal operators as a guide to their delivery and handling of the grain.

In the Eastern Division, sampling and grading service is provided on request at Chatham and Toronto for eastern grown grain. At Montreal, Quebec, Sorel, Three Rivers, Baie Comeau, St. John and Halifax, grain loaded into vessels for export is sampled and reviewed with respect to grade.

Grades of all grain in store in all terminal and eastern elevators weighed over during the crop year are verified by officials of the Inspection Branch.

Crop Conditions and Grades, 1959, Western Division

Western Canada had great extremes in weather in 1959. In the spring, soil moisture varied from extremely low in the central and southern parts of the Prairies, to adequate in the northern and western areas, and excessive in eastern Manitoba. The dry area continued dry and hot through summer, so much of the crop was light. Outside of the dry belt, to the west, north and east, many crops were damaged by frosts and by rain at harvest time; large areas of crops were left in the fields under snow, to be threshed after freeze-up or in the spring.

The proportion of high grades of grain shipped was remarkable, considering the bad weather that the crops endured; although there is no doubt that much of the lower grade grain was used on the farms as feed, including grain that was possibly damaged in drying on the farms. The farmers generally were obviously impressed by publicity given to the risk of loss of precious markets if grain that was damaged in drying should be sold to overseas millers or maltsters, represented as Canadian "quality" grain.

Manitoba No. 3 Northern was the predominating grade (31.7%) of red spring wheat shipments through the 1959-60 crop year. Shipments of Manitoba No. 2 Northern were down from the previous year (27.9% against 33.5%), as was Manitoba No. 1 Northern (1.4% against 1.9% in the 1958-59 crop year); but only 16.0% of shipments graded Manitoba No. 4 Northern, No. 5 and No. 6. The figures given here do not include Tough and Damp red spring wheat (20.3% of all carlot shipments), practically all of which was promoted to straight grade after drying in terminal elevators.

In considering the percentages of different grades shipped, it must be remembered that these contain varying proportions of grain carried over from the previous crop year. Farmers are naturally disposed to sell their higher grade, thus higher priced, grain and use the lower priced grain for feed; how-

ever, it is significant that the supply of low grade wheat virtually disappeared through the summer of 1960.

The pattern of grades of durum wheat shipped in the 1959-60 crop year was even better than that of red spring wheat. Less than 12 percent of shipments were graded No. 4, No. 5 and No. 6 Canada Western Amber Durum. This could be attributed to the fact that little durum wheat is grown in the northern areas where the weather was so bad in the fall of 1959. The same applied to rye, which was generally of high grade; 65.2% of shipments of this grain were graded No. 1 or No. 2 Canada Western.

Only 14.7% of oats shipped during the crop year were "straight" grade (dry) No. 3 Canada Western and higher. Damage from mildew, the result of weathering, was more conspicuous in oats than for several years.

41.3% of the barley shipped in cars from the country were graded No. 3 Canada Western or higher (including six-row and two-row), but much of this was not accepted by domestic maltsters or exporters to the malting trade, on account of thin, ripe kernels from the dry areas, and because mechanical handling increased the percentages of peeled kernels—the cause was loose hulls from weathering of the ripe crops in the wetter areas. Much of this barley was subsequently demoted to "feed" grades in the terminal elevators because it could not be delivered in conformity with requirements of the malting trade.

Flaxseed showed the effect of weathering in the fall. Only 66.8% was graded No. 1 Canada Western, compared to 89.0% in the 1958-59 crop year. Much of the rapeseed shipped was high in moisture content, and was dried in terminal elevators. Both rapeseed and flaxseed that was caught in the fields under snow meant substantial losses to the growers; they took serious losses in grade, and in many cases these grains were not worth threshing in the spring.

Mustard seed produced in the Lethbridge district, was about 90% No. 1 Canada Western, with Oriental variety predominating.

Crop Conditions and Grades, 1959, Eastern Division

In Eastern Canada, the winter of 1958-59 was particularly hard on crops of winter varieties of wheat and barley. Winter-killing of these grains was so severe in southwestern Ontario that much of the acreage was resown in the spring. The losses of winter barley were offset by planting of spring barley, but wheat production was sharply reduced.

The summer of 1959 was abnormally dry in Ontario and Quebec, so the early-maturing grains, namely wheat, barley, rye, oats and flaxseed were of generally high quality. 59% of carlots of wheat inspected were graded No. 1 or No. 2 Canada Eastern Winter, and 89% of carlots of barley were graded No. 2 or No. 3 Canada Eastern Six-Row.

The late-maturing crops, corn, soybeans and pea beans were helped by timely rains in early September, and subsequent fine harvest weather produced good average quality in these crops. Frost in some areas was as early as September 14 and did limited damage to late crops of soybeans; 81% of soybeans inspected were graded No. 1 or No. 2 Canada Yellow, including 26% tough and damp.

77% of pea beans were graded No. 1 and Extra No. 1 Canada Eastern; the colour was very good and incidence of damage from disease was low.

55% of cars of corn inspected qualified for straight grades (dry or extra dry) No. 1 and No. 2 Canada Eastern; 44% of all cars inspected were off-grade on account of excessive moisture content.

Control of Drying of Grain

The great volume of 1959 crop grain that was threshed with high moisture content taxed drying facilities to the utmost. Dryers at terminal elevators worked at full capacity through the winter and spring; over 53 million bushels were dried in the terminals under strict supervision of the Grain Inspection Branch. The Board's Research Laboratory gave excellent collaboration in the testing of samples to determine effects of drying on the quality of the grain.

Dryers were also set up in some farming areas, to cope with the problem of storing and shipping damp grain. An assiduous, extensive operation, conducted jointly by the Research Laboratory and the Inspection Branch, resulted in such control of drying that damage to grain was held to an almost negligible level.

The small amount of grain shipped that was damaged in drying was graded Rejected Dried.

Samples Submitted For Grading

18,628 samples submitted by country elevator operators and farmers, "subject to inspector's grade and dockage", were graded during the 1959-60 crop year, compared to 13,627 during the previous crop year.

Farmers' Complaints on Carlot Shipments

During the crop year 1959-60, the Inspection Branch received 51 requests from farmers to establish whether the identity of carlots of special bin grain had been preserved in the handling through country elevators. In 13 instances it was established that the identity of the farmers' grain had not been preserved. Appropriate settlements were made by the elevator operators in these cases.

Extension of Grain Inspection Services

The construction of the 12-million bushel elevator at Baie Comeau on the Lower St. Lawrence River, required the establishment of official grain inspection service there in order to provide final certificates of grade on outward vessel shipments. The Board provided staff for the inspection of Canadian grain, and the United States Department of Agriculture provided staff for the grading of U.S. grain. The U.S. Department of Agriculture also opened an office in Montreal to handle the grading of their grain at the elevators in the Upper St. Lawrence district.

Kernel Characteristics of Varieties

The Inspection Branch provides a special service to plant breeders in the Department of Agriculture by examining and reporting on the kernel characteristics of new varieties and hybrids of red spring, amber durum and winter wheat and barley.

The report points out the desirable and undesirable kernel characteristics of each variety and describes the appearance of the sample in comparison with the normal appearance of high quality Canadian red spring wheat.

Preliminary reports are made directly to plant breeders on new varieties in their earliest stages of development. This gives the plant breeder invaluable guidance in deciding which varieties he should continue to develop. In the final stages of development, a detailed report is made to the plant breeders and the Associate Committee on Grain Research. This report is of value when the variety is considered for licensing.

In 1960, almost 2,000 samples, representing 135 new varieties and selected lines of established varieties, were examined and reported on.

The constant production of new varieties has made it necessary to institute a more intensive program of staff training in varietal identification for our inspectors. This has been done in conjunction with an expanded staff training program for Grain Inspectors and Grain Inspection Assistants which was inaugurated throughout the system this year.

In connection with this work, the Inspection Branch prepared for publication an illustrated handbook entitled "Identification of Barley and Wheat Varieties by Kernel Characters", especially for the use of Grain Inspectors and grain handlers. This publication has been well received by the grain trade and agricultural institutions in Canada, the United States of America and overseas.

Changes in Malting Grades of Barley

In response to a request made in the meeting of the Committee on Western Grain Standards in October, 1959, the Board investigated problems regarding grades of barley. In meetings with representatives of all interests in the malting barley business, from farmers to exporters, it was established that much barley being admitted to "malting" grades was being demoted to "feed" grades for two reasons, (1) due to unavoidable increase in peeled and broken kernels in handling at terminal elevators, barley received containing within one percent of the maximum tolerances in the malting grades would usually not qualify for the same grades on delivery from the terminals, and (2) much barley being admitted into top grades was not acceptable by domestic or foreign maltsters on account of small kernel size. Therefore, in the interests of the growers of barley of true "malting" quality, kernel size specifications were introduced, and tolerances of peeled and broken kernels were reduced in the grades of No. 2 and No. 3 Canada Western barley. Also, the commercial grade of No. 4 Canada Western Six-Row barley was rescinded because it had proved useless. These changes were made effective on August 1, 1960.

Collaboration with U.S.A. Grain Inspection Service

The increased handling of United States grain through Canadian elevators resulting from the St. Lawrence Seaway development, led to their Department of Agriculture establishing grain inspection offices at Montreal and Baie Comeau to provide official United States inspection of their grain.

Negotiations with officials of the United States grain inspection service were completed by the Board's Chief Grain Inspector on the occasion of his attendance at a biennial conference of senior officials of the United States service in Toledo, Ohio, May, 1960. A practical, satisfactory program was set up, including arrangements for the Board to provide sampling service for the United States inspectors at the elevators in the St. Lawrence.

Improvements in Equipment

During the year the Inspection Branch participated in the testing of experimental apparatus for sampling of grain by mechanical means in various types of elevator installations. This was done in conjunction with the regular program of control of sampling, particularly in terminal and Eastern elevators. This work resulted in some new installations of mechanical samplers in terminals, and the prospect of several more units being installed.

Increasingly exacting specifications require more and better equipment for grading. For example, when the assessment of dockage on export shipments of oil seeds was changed from the nearest one-half of a percent to the nearest one-tenth percent, this dictated the need for faster, more precise scales, cleaning machines and sieves; similarly, new precision equipment became necessary with the introduction of requirement as to size of kernels in the top grades of barley.

Improvements in accuracy and speed of testing grain for moisture were introduced with the technical assistance of the Board's Research Laboratory. An electrical meter supplanted the older distillation method for the testing of some kinds of grain.

The program for acquisition of better equipment, while short of known requirements, made significant progress during the year.

Staff Training

The rate of introduction of new kinds and varieties of grain in Canada in recent years and a new method of recruiting prospective grain inspectors, have required a real expansion of the training program for grain inspectors and grain inspection assistants. This phase of staff training has become an increasingly significant function of the Inspection Branch head office. A senior inspector of the Chief Inspector's staff handles this important project. In the winter of 1959-60 this officer made a trip to offices through the system to give personal instruction and guidance to staff. In addition, he directed a program of staff training that is conducted through the year by senior grain inspectors at all points.

Visitors to the Inspection Branch

During the 1959-60 crop year, 81 people from foreign countries visited in the head offices of the Board's Inspection Branch, and many of these also visited terminal points where they were shown how the inspection services function. The visitors included officials of foreign governments, men in private grain trade, and members of the Canadian Foreign Trade Service.

These visits are invaluable to trade relations; the effectiveness of the Canadian inspection system obviously makes a good impression on these people who play important roles in the marketing of our grain.

Western Division

Table D-1.—Carlot Inspections by Points, Crop Year 1959-60, compared with 1958-59

	1959-60	1958-59	1959-60	1958-59
			percent of total	
Fort William.....	155,380	144,666	57.1	53.8
Winnipeg.....	10,583	11,231	3.9	4.2
Churchill.....	12,109	10,712	4.5	4.0
Moose Jaw.....	2,879	3,547	1.1	1.3
Saskatoon.....	7,648	8,337	2.8	3.1
Calgary.....	5,472	4,864	2.0	1.8
Edmonton.....	1,782	3,108	0.7	1.2
Medicine Hat.....	2,577	1,981	0.9	0.7
Lethbridge.....	402	281	0.1	0.1
Prince Rupert.....	4,416	3,863	1.6	1.4
Vancouver.....	68,690	76,244	25.3	28.4
Totals.....	271,938	268,834	100.0	100.0

Table D-2.—Carlot Inspections, Crop Year 1959-60

Grade	Carlots	Percentage	Percentage of Total Wheat Inspected
WHEAT			
1 Manitoba Northern.....	2,491	1.4	1
2 Manitoba Northern.....	51,010	27.9	2
3 Manitoba Northern.....	57,888	31.7	3
4 Manitoba Northern.....	21,414	11.7	1
No. 4 Special.....	314	0.2	0
No. 5.....	7,378	4.0	0
No. 6.....	517	0.3	0
Feed.....	9	*	0
Garnet.....	125	0.1	0
Tough.....	25,038	13.7	1
Damp.....	12,136	6.6	0
Smatty.....	107	0.1	0
Rejected.....	4,248	2.3	1
Others Red Spring.....	90	*	0
Total Red Spring Wheat.....	182,765	100.0	92.5
DURUM			
1 Canada Western Amber Durum.....	15	0.1	0
2 Canada Western Amber Durum.....	4,383	31.5	3
3 Canada Western Amber Durum.....	4,683	33.7	3
Extra 4 Canada Western Amber Durum.....	2,628	18.9	1
4 Canada Western Amber Durum.....	1,553	11.2	1
5 Canada Western Amber Durum.....	74	0.5	0
6 Canada Western Amber Durum.....	3	*	0
Tough Durum.....	173	1.2	0
Others Durum.....	401	2.9	0
Total Amber Durum Wheat.....	13,913	100.0	7.1
WHEATS			
Total Soft White Spring Wheat.....	171	—	0.1
Total Mixed Wheat.....	79	—	*
Total Alberta Winter Wheat.....	652	—	0.3
Total All Wheats.....	197,580	—	100.0

Table D-2.—Carlot Inspections, Crop Year 1959-60—Continued

Grade	Carlots	Percentage
OATS		
2 Canada Western.....	32	0.3
Extra 3 Canada Western.....	214	1.7
3 Canada Western.....	1,586	12.7
Extra 1 Feed.....	1,539	12.3
1 Feed.....	7,657	61.4
2 Feed.....	287	2.3
3 Feed.....	50	0.4
Mixed Feed.....	146	1.2
Tough.....	619	5.0
Damp.....	180	1.4
Rejected.....	73	0.6
Others.....	94	0.7
Total Oats.....	12,477	100.0
BARLEY		
1 Canada Western Six Row.....	18	*
2 Canada Western Six Row.....	2,006	4.3
3 Canada Western Six Row.....	13,504	28.8
4 Canada Western Six Row.....	3,872	8.3
1 Canada Western Two Row.....	26	0.1
2 Canada Western Two Row.....	660	1.4
3 Canada Western Two Row.....	3,134	6.7
1 Feed.....	13,565	29.0
2 Feed.....	3,489	7.4
3 Feed.....	350	0.7
Tough.....	4,590	9.8
Damp.....	1,132	2.4
Rejected.....	432	0.9
Others.....	74	0.2
Total Barley.....	46,852	100.0
RYE		
1 Canada Western.....	10	0.4
2 Canada Western.....	1,538	64.8
3 Canada Western.....	592	24.9
4 Canada Western.....	94	4.0
Ergoty.....	22	0.9
Tough.....	98	4.1
Damp.....	11	0.5
Rejected.....	8	0.3
Others.....	2	0.1
Total Rye.....	2,375	100.0
FLAXSEED		
1 Canada Western.....	6,014	66.8
2 Canada Western.....	443	4.9
3 Canada Western.....	174	1.9
4 Canada Western.....	50	0.5
Tough.....	1,393	15.5
Damp.....	731	8.1
Rejected.....	9	0.1
Others.....	195	2.2
Total Flaxseed.....	9,009	100.0

Table D-2.—Carlot Inspections, Crop Year 1959-60—Continued

Grade	Carlots	Percentage
Corn.....	94	—
Mixed Grain.....	124	—
Screenings.....	309	—
Buckwheat.....	13	—
Peas.....	112	—
Rapeseed.....	2,453	—
Sample Grain.....	48	—
Safflower Seed.....	96	—
Mustard Seed.....	343	—
Sorghum (U.S.A. Origin).....	35	—
Condemned Grain.....	18	—
Grand Total.....	271,938	—

* Less than 0.5%.

Table D-3.—Carlots of Tough, Damp and Straight Grain Inspected, Crop Year 1959-60

Grain	Tough	Damp	Tough and Damp	Straight	Total
Wheat.....	25,211	12,136	37,347	160,233	197,580
Oats.....	619	180	799	11,678	12,477
Barley.....	4,590	1,132	5,722	41,130	46,852
Rye.....	98	11	109	2,266	2,375
Flaxseed.....	1,393	731	2,124	6,885	9,009
Totals.....	31,911	14,190	46,101	222,192	268,293
Others.....	—	—	—	—	3,645*
All Grains.....	—	—	—	—	271,938
PERCENTAGE OF TOTAL					
	%	%	%	%	%
Wheat.....	12.8	6.1	18.9	81.1	100.0
Oats.....	5.0	1.4	6.4	93.6	100.0
Barley.....	9.8	2.4	12.2	87.8	100.0
Rye.....	4.1	0.5	4.6	95.4	100.0
Flaxseed.....	15.5	8.1	23.6	76.4	100.0
Principal Grains.....	11.9	5.3	17.2	82.8	100.0
Others.....	—	—	—	—	100.0*

* Details not available.

Table D-4.—Number of Two-Pound Samples "Subject to Grade and Dockage" Inspected, Crop Year 1959-60 compared with Crop Year 1958-59

Point	1959-60	1958-59
	Number of Samples	
Winnipeg.....	11,828	9,981
Calgary.....	2,526	1,258
Edmonton.....	2,518	1,275
Moose Jaw.....	51	126
Saskatoon.....	467	512
Lethbridge.....	1,238	465
Medicine Hat.....	—	10
Totals.....	18,628	13,627

Table D-5.—Carlots Re-Inspected, Crop Year 1959-60

Point	In-spected	Re-In-spected	Un-changed	Grades Raised	Grades Lowered	Dockage Raised	Dockage Lowered
Fort William.....	155,380	10,477	9,587	718	121	8	43
Winnipeg.....	10,583	784	608	126	48	1	1
Churchill.....	12,109	—	—	—	—	—	—
Moose Jaw.....	2,879	219	193	25	1	—	—
Saskatoon.....	7,648	258	203	50	5	—	—
Calgary.....	5,472	311	271	37	1	—	2
Edmonton.....	1,782	82	70	10	2	—	—
Medicine Hat.....	2,577	189	127	43	18	—	1
Lethbridge.....	402	—	—	—	—	—	—
Prince Rupert.....	4,416	—	—	—	—	—	—
Vancouver.....	68,690	4,995	4,250	706	24	2	13
Totals.....	271,938	17,315	15,309	1,715	220	11	60

Percentage of Re-Inspections

	%	%	%	%	%	%	%
Fort William.....	100.0	91.5	6.8	1.2	0.1	0.4	—
Winnipeg.....	—	100.0	77.6	16.1	6.1	0.1	0.1
Churchill.....	—	100.0	—	—	—	—	—
Moose Jaw.....	—	100.0	88.1	11.4	0.5	—	—
Saskatoon.....	—	100.0	78.7	19.4	1.9	—	—
Calgary.....	—	100.0	87.1	11.9	0.3	—	0.7
Edmonton.....	—	100.0	85.4	12.2	2.4	—	—
Medicine Hat.....	—	100.0	67.2	22.8	9.5	—	0.5
Lethbridge.....	—	100.0	—	—	—	—	—
Prince Rupert.....	—	100.0	—	—	—	—	—
Vancouver.....	—	100.0	85.1	14.1	0.5	*	0.3
Totals.....	—	100.0	88.4	9.9	1.3	0.1	0.3

* Less than 0.05%.

Table D-6.—Summary of Carlot InspectionsAppealed, Crop Year 1959-60

Item	Winnipeg		Edmonton		Calgary		Total	
	Cars	Percent	Cars	Percent	Cars	Percent	Cars	Percent
Left as Graded.....	346	90.6	377	91.3	771	83.2	1,494	86.8
Grades Raised.....	28	7.3	32	7.7	146	15.8	206	12.0
Grades Lowered.....	8	2.1	4	1.0	9	1.0	21	1.2
Totals.....	382	100.0	413	100.0	926	100.0	1,721	100.0
Total Cars Inspected							271,938	100.0
Total Appeals							1,721	0.6
Total Grades Changed							227	0.08

Table D-7.—Vessel Shipments Inspected, Crop Year 1959-60

Grain	Fort William and Port Arthur	Vancouver	Victoria	Prince Rupert	Churchill	Total
Wheat.....	bu. 188,059,889	bu. 92,272,420	bu. 2,821,795	bu. —	bu. 22,111,400	bu. 305,265,50
Oats.....	29,193,409	2,719,179	14,889	—	37,600	31,965,50
Barley.....	58,477,765	22,941,616	—	8,895,404	—	90,314,78
Rye.....	4,033,693	312,134	—	—	—	4,345,88
Flaxseed.....	6,963,683	6,377,505	445,169	—	—	13,786,38
Buckwheat.....	23,544	—	—	—	—	23,54
*Sample Grain.....	361,617	—	—	—	—	361,61
*Screenings.....	2,940,751	33,352	—	—	114,861	3,088,96
*Canada Rapeseed.....	—	2,895,865	—	—	—	2,895,86
*Mustard Seed.....	—	496,836	—	—	—	496,83
*Mustard Seed (U.S.A. origin).....	—	11,105	—	—	—	11,10
**Safflower Seed.....	—	75,875	—	—	—	75,87
**Safflower Seed (U.S.A. origin).....	—	23,133	—	—	—	23,13
Totals.....	290,054,351	128,159,020	3,281,853	8,895,404	22,263,861	452,654,48

* In bushels of 50 lbs.

** In bushels of 45 lbs.

Table D-8.—Carlot Shipments ex Terminal Elevators Inspected, Crop Year 1959-60

Grain	Winnipeg	Fort William and Port Arthur	Calgary	Edmonton	Moose Jar
Wheat.....	95	1,413	780	1,302	88
Oats.....	255	990	16	144	67
Barley.....	261	704	1,175	27	11
Flaxseed.....	11	355	3	29	10
Rye.....	2	50	—	2	2
Mixed Grain.....	18	—	1	—	—
Corn.....	7	—	—	—	—
Buckwheat.....	3	4	—	—	—
Peas.....	33	—	—	—	—
Screenings.....	431	2,615	188	143	88
Rapeseed.....	—	36	77	243	1
Sample Feed Grain.....	10	—	36	—	16
Mustard Seed.....	—	—	—	—	—
Sample Grain.....	—	23	—	—	—
Oats Groats.....	—	2	—	—	—
Totals.....	1,126	6,192	2,276	1,890	283
Grain	Saskatoon	Lethbridge	Medicine Hat	Vancouver, Victoria and Prince Rupert	Churchill
Wheat.....	587	124	1	530	—
Oats.....	49	—	—	175	—
Barley.....	1	—	—	137	—
Flaxseed.....	22	15	46	7	—
Rye.....	—	1	—	9	—
Mixed Grain.....	2	—	—	6	—
Corn.....	—	—	—	—	—
Buckwheat.....	—	—	—	—	—
Peas.....	—	—	—	—	—
Screenings.....	470	2	—	1,144	47
Rapeseed.....	513	—	—	7	—
Sample Feed Grain.....	—	—	—	—	—
Mustard Seed.....	—	14	—	28	—
Totals.....	1,644	156	47	2,043	47

Eastern Division

Table D-9.—Carlot Inspections Eastern Grain, Crop Year 1959-60, by Grains and Points

Grain	Montreal	Toronto	Chatham	Total
Wheat.....	—	340	1,562	1,902
Oats.....	—	1	69	70
Barley.....	—	2	133	135
Rye.....	—	—	15	15
Buckwheat.....	6	—	4	10
Corn.....	—	1	1,573	1,574
Beans.....	—	—	174	174
Soybeans.....	—	71	1,478	1,549
Totals.....	6	415	5,008	5,429

Table D-10.—Carlot Inspections Eastern Grain, Crop Year 1959-60, by Grains, Grades and Points

Grades	Montreal	Toronto	Chatham	Total
WHEAT				
1 Canada Eastern White Winter.....	—	3	122	125
2 Canada Eastern White Winter.....	—	199	757	956
3 Canada Eastern White Winter.....	—	18	76	94
4 Canada Eastern White Winter.....	—	3	3	6
5 Canada Eastern White Winter.....	—	—	1	1
1 Canada Eastern Mixed Winter.....	—	—	30	30
2 Canada Eastern Mixed Winter.....	—	3	17	20
3 Canada Eastern Mixed Winter.....	—	—	1	1
Tough.....	—	55	455	510
Smutty.....	—	8	1	9
Weevilly.....	—	46	85	131
Damp.....	—	—	2	2
Sample.....	—	5	12	17
Totals.....	—	340	1,562	1,902

OATS

3 Canada Eastern.....	—	—	23	23
4 Canada Eastern.....	—	1	37	38
5 Canada Eastern.....	—	—	1	1
Tough.....	—	—	6	6
Sample.....	—	—	1	1
Condemned.....	—	—	1	1
Totals, Oats.....	—	1	69	70

BARLEY

2 Canada Eastern Six Row.....	—	—	6	6
3 Canada Eastern Six Row.....	—	—	114 $\frac{1}{2}$	114 $\frac{1}{2}$
4 Canada Eastern.....	—	2	7 $\frac{1}{2}$	9 $\frac{1}{2}$
5 Canada Eastern.....	—	—	1	1
Tough.....	—	—	3	3
Sample.....	—	—	1	1
Totals, Barley.....	—	2	133	135

Table D-10.—Carlot Inspections Eastern Grain, Crop Year 1959-60, by Grains, Grades and Points—Concluded

Grade	Montreal	Toronto	Chatham	Total
RYE				
2 Canada Eastern.....	—	—	7	7
Tough.....	—	—	8	8
Totals, Rye.....	—	—	15	15
BUCKWHEAT				
Tough.....	5	—	2	7
Damp.....	1	—	2	3
Totals, Buckwheat.....	6	—	4	10
CORN				
Extra Dry 1 Canada Eastern Yellow.....	—	—	99	99
1 Canada Eastern Yellow.....	—	—	460	460
Extra Dry 2 Canada Eastern Yellow.....	—	—	71	71
2 Canada Eastern Yellow.....	—	—	211	211
Extra Dry 3 Canada Eastern Yellow.....	—	—	11	11
3 Canada Eastern Yellow.....	—	—	22	22
Extra Dry 4 Canada Eastern Yellow.....	—	—	3	3
4 Canada Eastern Yellow.....	—	—	1	1
Extra Dry 5 Canada Eastern Yellow.....	—	—	1	1
5 Canada Eastern Yellow.....	—	—	1	1
Tough.....	—	—	168	168
Damp.....	—	1	400	401
Moist.....	—	—	123	123
Wet.....	—	—	1	1
Sample.....	—	—	1	1
Totals, Corn.....	—	1	1,573	1,574
BEANS				
Extra 1 Canada Eastern Pea.....	—	—	1	1
1 Canada Eastern Pea.....	—	—	131	131
2 Canada Eastern Pea.....	—	—	23	23
3 Canada Eastern Pea.....	—	—	9	9
4 Canada Eastern Pea.....	—	—	1	1
2 Canada Eastern Light Red Kidney.....	—	—	7	7
3 Canada Eastern Yellow Eye.....	—	—	1	1
4 Canada Eastern Yellow Eye.....	—	—	1	1
Totals, Beans.....	—	—	174	174
SOYBEANS				
1 Canada Yellow.....	—	—	312	312
2 Canada Yellow.....	—	42	505	547
3 Canada Yellow.....	—	2	61	63
4 Canada Yellow.....	—	—	12	12
5 Canada Yellow.....	—	—	1	1
Tough.....	—	22	450	472
Damp.....	—	5	106	111
Moist.....	—	—	26	26
Wet.....	—	—	4	4
Sample.....	—	—	1	1
Totals, Soybeans.....	—	71	1,478	1,549
Totals, All Grains.....	6	415	5,008	5,429

Table D-11.—Cargo Inspections, Eastern Grain, Crop Year 1959-60

Grain	St. John and Halifax	Montreal	Toronto	Chatham	Total
	bu.	bu.	bu.	bu.	bu.
Oats.....	—	38,285	—	—	38,285
Corn.....	—	—	—	633,311	633,311
Soybeans.....	—	18,666	226,700	2,586,067	2,831,433
Totals.....	—	56,951	226,700	3,219,378	3,503,029

Table D-11A.—Cargo Inspections, Western Grain, Crop Year 1959-60

Grain	St. John and Halifax	Montreal	Toronto	Chatham	Total
	bu.	bu.	bu.	bu.	bu.
Buckwheat.....	—	47,366	—	—	47,366
Flaxseed.....	559,870	360,237	—	—	920,107
Rapeseed.....	—	35,654	—	—	35,654
Peas.....	21,251	54,530	—	—	75,781
Totals.....	581,121	497,787	—	—	1,078,908

Table D-12.—Inspections, Eastern Grain in Bins, Trucks or Warehouses, Crop Year 1959-60

Grain	Montreal	Toronto	Chatham	Total
	bu.	bu.	bu.	bu.
Wheat.....	—	—	850	850
Oats.....	199,340	—	—	199,340
Buckwheat.....	62,399	—	—	62,399
Corn.....	—	—	500	500
Beans.....	—	1,000	393,758	394,758
Soybeans.....	—	—	99,826	99,826
Totals.....	261,739	1,000	494,934	757,673

Table D-12A.—Inspections, Western Grain in Bins, Trucks or Warehouses, Crop Year 1959-60

Grain	Montreal	Toronto	Chatham	Total
	bu.	bu.	bu.	bu.
Rapeseed.....	3,360	—	—	3,360
Mustard Seed.....	2,000	—	—	2,000
Totals.....	5,360	—	—	5,360

Table D-13.—Inward and Export Cargoes Sampled and Grade Checked,
Crop Year 1959-60.

	Montreal	Sorel	Three Rivers	Quebec	Halifax and St. John	Total
EASTERN GRAIN	bu.	bu.	bu.	bu.	bu.	bu.
Inward.....	2,665,714	—	—	—	—	2,665,714
Export.....	2,375,037	—	—	—	111,875	2,486,912
WESTERN GRAIN						
Inward.....	28,098,636	—	—	—	—	28,098,636
Export.....	56,224,786	16,959,684	11,127,948	8,503,928	24,555,277	117,371,623
Totals.....	89,364,173.	16,959,684	11,127,948	8,503,928	24,667,152	150,622,888

Table D-14.—Grain Sampled but not Inspected, Crop Year 1959-60

	Montreal	Toronto and Chatham	Sorel, Three Rivers and Quebec	Halifax and St. John	Total
EASTERN GRAIN					
Carlots.....	3	—	—	—	—
Inward Cargoes (bu.).....	—	—	—	—	—
Outward Cargoes (bu.).....	11,886	—	—	—	11,886
Bin Lots (bu.).....	27,048	—	—	—	27,048
WESTERN GRAIN					
Carlots.....	230	4	—	—	234
Inward Cargoes (bu.).....	142,726	—	216,575	—	359,301
Outward Cargoes (bu.).....	1,132,781	—	380,240	484,674	1,997,695
Bin Lots (bu.).....	327,230	9,948	677,708	—	1,014,888
U.S.A. GRAIN					
Carlots.....	248	—	—	—	248
Inward Cargoes (bu.).....	1,547,480	—	375,804	—	1,923,284
Outward Cargoes (bu.).....	10,120,503	—	348,602	—	10,469,105
Bin Lots (bu.).....	116,674	—	—	—	116,674
Totals—Cars.....	481	4	—	—	485
—Bushels.....	13,426,328	9,948	1,998,929	484,674	15,919,871

APPENDIX E

Grain Weighing Branch

J. J. MANSON, *Chief Grain Weighman*

Under the provisions of Sections 33 and 124 of the Canada Grain Act, all grain received into or shipped from licensed terminal elevators is weighed under supervision of the Board's weighing staffs. Weighing services are also provided at licensed mill elevators in the Western Division.

During the Crop Year 1959-60 services were provided at forty-five semi-public and private terminal elevators and when required, at twenty-nine mill elevators in the Western Division.

All scales and equipment for transferring grain to scales on receipt and from scales for shipment in all licensed terminal elevators and serviced mill elevators were regularly inspected during the crop year under provision of Section 92 of the Act.

In accordance with the special arrangement with the Standards Branch of the Department of Trade and Commerce, all scales in licensed terminal and eastern elevators were inspected, verified and stamped by the Board's Scale Inspector acting as an inspector under the Weights and Measures Act.

A semi-annual inspection was also made of all scales in terminal elevators to ascertain if scales were maintaining their accuracy. Special inspections were made when any doubt arose as to the accuracy of any scale.

Attention has been given to alterations in elevators and dust control installations to ensure that such changes or alterations do not affect the accuracy of the weighing of grain received at or shipped from these elevators.

The bringing into operation of the Deep Seaway has enabled deep sea vessels to proceed to the Lakehead to load grain cargoes. In this connection, several of the Lakehead elevators and particularly new constructions, are changing their systems of loading in an endeavour to better facilitate the loading of deep sea ships.

A new type of steel tank storage bin is being constructed at one of the Port Arthur elevators.

During the crop year under review, 273,201 carlots of grain were weighed on receipt at terminal and mill elevators in the Western Division, and of these carlots, 54,986 or 20.1% were reported leaking and 5,730 or 2.1% were reported without seals or had defective seals. There was also a total of 16,793 cars weighed out of terminals.

The Branch maintained a close checking of reported outturns at eastern elevators of cargoes loaded at Lakehead elevators and investigations were made in cases of reported excessive shortages with a view to assessing the liability where such could be established.

Under the provisions of Sections 139 and 140 of the Canada Grain Act, weighovers were conducted at twenty-five terminal elevators and twenty eastern elevators. Results of weighovers were submitted to the Board for comparison with records of outstanding warehouse receipts and preparation of official statements. The Board found it necessary to defer several terminal and eastern elevator audits due to heavy stocks of grain in store.

Table E-1.—Gross Quantities of all Grains Weighed at Terminal Elevators in the Western Division during 1959-60 Crop Year

Point	Wheat			Oats			Barley			Rye			Flaxseed			Canadian Corn			Canadian Buckwheat			Miscellaneous		
	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	bu.	lb.				
RECEIPTS																								
Fort William-Port Arthur	206,693	871	26,682	763	60,419	965	3,989	423	9,065	809	30,846									18,739,990				
Vancouver-New Westminster	92,045	093	271	23,237	522	369,365	5,986	422	474											171,521,480				
Victoria	3,042	524	2,681	554	9,535	127	283																	
Prince Rupert																								
Churchill	22,261	797	1,110		1,991	447			5,468											8,888,880				
Calgary	1,609	020		46,031	47,288			5,239		4,259										15,943,590				
Edmonton	2,006	200						1,664	31,949										1,487,960					
Lethbridge	360	979						1,604	1,422										89,000					
Moose Jaw	7,600		151,124		2,058				35,511										59,532,490					
Saskatoon	259,820		45,207		26,805			4,096	1,467										751,020					
North Transcona	114,118		23,356																					
Total Receipts	328,401	022	29,631	416	95,260	419	4,366	435	15,555	357	4,259	30,846	276,954,410											
SHIPMENTS																								
Fort William-Port Arthur	188,385	069	31,157	117	64,183	820	4,111	394	7,601	449									335,055,520					
Vancouver-New Westminster	92,865	941	3,421	148	23,255	373	326,984		6,286	048									293,336,990					
Victoria	2,859	621	17,966		8,896	325			444	082									5,168,780					
Prince Rupert																			4,877,790					
Churchill																			8,466,640					
Calgary																			9,951,380					
Edmonton	21,700	046	175,953		2,071	606			5,468										17,332,000					
Lethbridge	1,514	207	6,476																813,890					
Moose Jaw	2,289	059	63,521		39,816														89,410					
Saskatoon	281	712																	61,034,500					
North Transcona	1,061	183	11,059		2,058														677,440					
			80,934		56,561			35,434		4,096	1,467													
Total Shipments	311,095	895	35,060	847	98,487	234	4,445	742	14,419	037	30,508	7,085	14,419,037	30,508	7,085	14,419,037	30,508	7,085	14,419,037	30,508				

Table E-2.—Number of Cars Leaking and Cars with Missing Seals at the Lakehead, Other Points and at Winnipeg Yards, by Railways, for the Crop Year 1959-60

Destination	Cars Leaking		Missing Seals	
	C.N.R.	C.P.R.	C.N.R.	C.P.R.
Lakehead Elevators and Yards.....	20,317	17,835	2,047	1,485
Other Points.....	8,888	7,946	1,331	867
Totals.....	29,205	25,781	3,378	2,352
Totals—Both Railways.....	54,986		5,730	
Winnipeg Yards.....	920	764	591	614

Table E-3.—Number of Cars Weighed at all Points and Percentage of such Cars found Leaking or with Defective Seals, Crop Years 1958-59 and 1959-60

	Number		Percentage of Total	
	1959-60	1958-59	1959-60	1958-59
Cars Weighed In.....	273,201	273,651	100.0	100.0
Inward Cars Leaking.....	54,986	51,322	20.1	18.7
Inward Cars with Missing or Defective Seals.....	5,730	5,755	2.1	2.1
Cars Weighed Out.....	16,793	21,125	—	—

Table E-4.—Average Reported Outturn Shortages on Vessel Shipments of Grain from Fort William-Port Arthur to Canadian and United States Ports during the 1959-60 Crop Year

Grain	Bushels Shipped	Shortage in Pounds per 1,000 bushels	
		1959-60	1958-59
CANADIAN PORTS			
Wheat.....	152,844,243	32.09	30.49
Durum Wheat.....	25,238,458	35.43	35.18
Oats.....	28,920,511	24.98	23.07
Barley.....	37,613,033	33.66	27.44
Rye.....	777,428	36.68	55.45
Flaxseed.....	5,195,746	40.35	33.65
Buckwheat.....	—	—	24.00
Sample Grain (in lbs.).....	19,166,210	.60 lbs. per 1,000 lbs.	.49 lbs. per 1,000 lbs.
Screenings (in tons).....	36,617	1.32 lbs. per ton	1.29 lbs. per ton

UNITED STATES PORTS

Wheat.....	2,623,006	62.52	77.02
Oats.....	67,970	12.50	23.17
Barley.....	13,426,245	53.56	49.63
Rye.....	3,290,289	52.58	77.46
Screenings (in tons).....	34,590	—	—

TOTAL CANADIAN AND UNITED STATES PORTS

Wheat.....	155,467,249	32.09	31.58
Durum Wheat.....	25,238,458	35.43	35.18
Oats.....	28,988,481	24.89	23.17
Barley.....	51,039,278	38.89	31.53
Rye.....	4,067,717	49.53	70.28
Flaxseed.....	5,195,746	40.35	33.65
Buckwheat.....	—	—	24.00
Sample Grain (in lbs.).....	19,166,210	.60 lbs. per 1,000 lbs.	.49 lbs. per 1,000 lbs.
Screenings (in tons).....	71,207	.71 lbs. per ton	.76 lbs. per ton

APPENDIX F

The Grain Research Laboratory

J. ANSEL ANDERSON, *Director*

Section 22 of the Canada Grain Act requires that "the Board shall maintain an efficient and adequately equipped laboratory for research work in relation to grain."

The following summary of the Laboratory's work for 1960 deals with the quality of Canadian grain marketed in the 1959-60 crop year, the quality of 1960 grain crops, and research and other activities. In accordance with previous practice, a separate annual report will be published by the Laboratory to put on record data on the quality of Canadian grain and progress made in research.

Quality of Grain Marketed in 1959-60

Throughout the crop year, the Laboratory continued to study the quality of spring wheat, durum wheat, barley, flax and other cereal grains at various stages of marketing. Detailed data obtained in these studies will be reported in the Laboratory's 1960 Annual Report.

Protein content of Canadian wheat has averaged about 14% for four successive years; accordingly, wheat from the carryover and wheat from the 1959 crop provided ample supplies of high quality grain throughout the 1959-60 crop year. Compared to the previous crop year, wheat marketed in 1959-60 was slightly higher in protein content and a little lower in bushel weight. Baking absorption and baking strength were high and supporting value was good. The relation between dough elasticity and extensibility was satisfactory. Wheat shipped from Pacific ports was more variable in quality than wheat shipped from Atlantic ports. Durum wheat marketed in 1959-60 was high in protein content but slightly lower in bushel weight than last year. Macaroni-making quality was excellent and rheological properties were somewhat better for the lower grades in this crop year. Malting barley was slightly lower in bushel weight, yield of plump barley, and yield of malt extract, than in 1958-59. Flax and rapeseed shipments were higher in average quality compared to those of the previous crop year.

Estimated Quality of 1960 Crops

Good moisture reserves and adequate spring rainfall got 1960 western grain crops away to an excellent start, but near-drought conditions that began in mid-July and continued throughout the remainder of the growing season reduced prospects of above-average yields. Most crops stood up surprisingly well to the drought, and harvesting was completed by mid-October under ideal weather conditions. Estimates of production for 1960 western crops are: wheat, 470 million bushels (including 16.3 million bushels of durum wheat); barley, 201 million bushels; flax 24.9 million bushels; and rapeseed 551 million pounds. There was very little tough and damp grain, and crops were practically free of the various types of damage associated with adverse harvesting weather.

The Hard Red Spring wheat crop is high in grade, protein content, baking strength and supporting value. Compared to 1959-60 fourth quarter cargo shipments, bushel weight is lower this year, but the Northern grades mill very well and give high yields of flour of good color and satisfactory ash. Baking absorption and gassing power are both satisfactory, and doughs handle well during the baking process. Physical dough tests show a good balance between extensibility and elasticity. Average protein content at 14.2% is equal to the third highest on record. About 85% of the wheat will grade No. 2 and No. 3 Northern; there will be some No. 4 Northern but very little No. 1 Northern. The 1960 crop will ensure continued supplies of high-quality grain in commercial channels during the current crop year.

The Amber Durum wheat crop will be predominantly No. 2 and No. 3 C.W., about 10% will grade Extra No. 4 C.W. and there will be very small amounts of No. 1 and No. 4 C.W. The crop is high in protein, a little higher in bushel weight for the top grades than last year, but kernel weight is lower. The wheat is vitreous, mills well, and gives good yields of semolina. Yellow pigment is high and rheological properties and macaroni quality are excellent. As the new crop becomes blended with wheat in the carryover, protein content and macaroni color will be maintained and rheological properties will be improved, particularly in the lower grades.

The barley crop withstood the lack of moisture fairly well. Compared to last year, bushel weight is lower and nitrogen is higher which will result in a reduced yield of malt extract. Yield of plump barley will be high in the Six-row grades. A reduction in the tolerance for peeled and broken kernels and the introduction of a sieving test into the grading system on August 1, 1960, will contribute to a better class of barley for domestic use and for export.

The flax crop is of good average quality but the quality of the rapeseed crop was reduced by the drought conditions. Average results for the flax crop show that oil content is 41.4%, iodine value is 186 units, and protein content is 45.7%. Average results for the rapeseed crop are 41.3% oil and 43.2% protein.

Bulletins and Maps

Quality information for different grades of 1960 western grain crops was presented at the October meeting of the Committee on Western Grain Standards and later was published in maps and crop bulletins, i.e., two wheat protein maps (preliminary and final—5,200 copies); two bulletins on wheat (11,400 copies); one bulletin on barley (4,000 copies); and one bulletin on flax and rapeseed (1,000 copies). Distribution of these publications is made by mail and over the counter by the Laboratory, and also by the Canadian Wheat Board, the Grain Division, Department of Trade and Commerce, Ottawa, and Canadian Government Trade Commissioners. The Bulletin "Canadian Wheat 1959" was also distributed by Canadian representatives at the Netherlands Baking Foundation (NEBATO) Exhibition in Amsterdam last spring. Press releases preceded publication of all these reports.

Publication of the two quarterly bulletins (one on red spring wheat cargoes and one on durum wheat cargoes) was continued to the end of the 1959-60 crop year. Beginning with the first quarter of the 1960-61 crop year these two bulletins were published in English, French, German and Spanish instead of in English only. It is hoped that this important change will bring the bulletins to the attention of a greater number of readers in more countries. Distribution of quarterly bulletins will continue to be made by Canadian Government Trade Commissioners, who receive their supplies direct by air mail, and by the Laboratory.

Service to Grain Inspection Branch

During the year the Laboratory continued to work closely with the Grain Inspection Branch by providing such services as are required to aid in grading and associated problems. The more important work dealt with the quality tests on dried wheat, preliminary tests on samples that were used to make up Standard samples, and detailed quality studies on tentative Standard and Standard Export samples. Supervision of moisture-testing equipment in the Inspection Offices continued as one of the Laboratory's main services to the Inspection Branch. Seventy-five CAE moisture meters have been installed in the various Inspection Offices. The meter has been calibrated for spring wheat, barley, oats, flax and rapeseed, and it is now used almost exclusively for moisture tests on these grains. A regular check test system has been instituted, and results have shown that meters are being operated with a high degree of accuracy.

Other work for the Inspection Branch included: mercury detection in grain treated with mercurial fungicides, lipoxidase determinations on durum wheat, fatty acid tests on oil seeds, and a study of the relation between oil content of rapeseed and seed size.

Grain Drying 1959 Crop

The wet weather during the 1959 harvest was reminiscent of 1951 when nearly half the crop delivered was tough or damp. Over 53 million bushels of the 1959 crop were dried at Canadian terminal elevators, an estimated 10 million bushels of wheat were dried on farms, and about 56 million bushels of unthreshed wheat were left in the field under the snow all winter; most of this wheat however, was threshed in a dry condition in the spring of 1960.

The Laboratory provided a quality testing service for samples from three sources; Terminal elevator dryers, farm drying, and Inspection Offices (carlots, cargoes, etc.). All Laboratory tests on dried wheat were made by a special Mixograph technique on corresponding before-drying and after-drying samples. When necessary, milling and baking tests were used to confirm the results.

As drying operations at terminal elevators are under the supervision of the Board's Inspection Branch, there was no difficulty in introducing previously established control procedures. Tests were made on samples from each elevator as soon as drying operations were started and were continued until satisfactory drying was established; periodic tests were made thereafter. The major difference between 1959 and 1951 drying operations was that the 1959 wheat was sometimes higher in moisture content. This necessitated a readjustment (principally a lowering of air temperature) of dryers at some elevators to assure safe drying conditions. All dryers installed at Lakehead and Pacific terminals were inspected by personnel from the Laboratory and the Inspection Branch.

In 1959, as in 1951, the Laboratory was faced with the problem of farm drying. Because of congestion in country elevators, farmers were unable to make immediate delivery of their tough and damp grain, and many purchased dryers. Since 1951, farm dryers have undergone further development in the United States where most of them are manufactured. There are many different makes; they are mostly portable recirculating batch dryers fired by propane gas, holding capacity ranges between 200 and 400 bushels, and the cost varies from about \$3,000 to \$6,000. In 1959 there were 14 different makes in use in Canada, comprising a total of 269 dryers, and most of them were in operation in the northern half of Saskatchewan and in northern and western Alberta. As was to be expected, many of the dryers were improperly operated when first put into use, thereby causing considerable damage to the

quality of the grain. To help farmers establish safe drying conditions the Laboratory offered a free testing service on before- and after-drying samples, publicity material was prepared and distributed, radio and television talks were given to warn farmers of the danger of spoiling grain by improper drying, and areas where the problem was most acute were visited by Laboratory personnel. A review of the Laboratory tests shows that there was a marked improvement as farm drying operations progressed.

The Laboratory also co-operated with the Agricultural Machinery Administration Branch of the Saskatchewan government in testing five main makes of farm dryers at their proving grounds in Regina. Results of tests are published in Saskatchewan government A.M.A. publications.

As farm-dried grain would eventually find its way into carlots, the Laboratory set up a program of testing carlots originating at stations in areas where farm drying was being done and which were suspected of containing dried grain. At the outset, a rapid stain test for detecting dried grain, developed by the Laboratory, was used by the Inspection Branch, but experience showed that although the test was positive for barley it was not foolproof for wheat. In these circumstances inspectors had to rely on their judgment in deciding whether a carlot might contain dried wheat and warranted further testing.

The number of tests made by the Laboratory in controlling drying operations during the 1959-60 crop year were as follows: Terminal elevators 840 (1,680 samples); farm dryers 658 (1,316 samples); and inspection samples, carlots, etc. 810. The total number of samples tested was thus 3,806.

Variety Testing

The Laboratory has continued to take a leading part in quality tests of varieties of spring wheat, durum wheat, western winter wheat, and malting barley developed by Canadian plant breeders; these annual studies are sponsored by the Associate Committee on Grain Research. Large seed supplies of Pembina and Canthatch (the two new bread wheat varieties licensed in 1959) have been built up for commercial production in 1961, and it is estimated that 200,000 bushels of Pembina and 450,000 bushels of Canthatch are in farmers' hands for spring seeding. As Pembina is more resistant to both stem and leaf rust than Selkirk, it is expected that the former will displace the latter in some parts of Manitoba and eastern Saskatchewan. Similarly, Canthatch will probably displace Thatcher in some of the other areas in Saskatchewan because of its greater stem rust resistance. Neither of these two varieties is expected to be grown to any extent in Alberta where Thatcher is the predominant variety.

Studies of varieties grown in the Uniform Quality Nursery have been continued, and Canadian plant breeders have been kept informed of the results. This information is utilized for selecting parent stock that combines desired agronomic characteristics with promising qualities. As in the past, the Laboratory has continued to participate in quality studies of wheat varieties grown in the United States under the auspices of the Crop Quality Council, formerly the Northwest Crop Improvement Association. Canadian as well as United States varieties are usually in these tests.

Three new barley varieties (Betzes, Palliser and Jubilee) were licensed by the Canada Department of Agriculture this year for release to farmers. Betzes, an introduction from Poland, is a Two-row rough-awned barley that is eligible for the malting grades. Palliser, which originated from the cross Vantage x Compana, is a Two-row smooth-awned variety that can grade no higher than No. 3 C.W. Two-row. Both varieties are suitable agronomically for growing in southwest Saskatchewan and southeast Alberta, and it is likely that they will replace Compana. Jubilee is a high-yielding rust-

resistant Six-row feed-type barley produced from a cross in which Peatland Regal, O.A.C.21, and Husky were parents. It is adaptable over a wide area in the central prairies. As there is increasing interest in Two-row barley for production in Western Canada, studies are in progress on some of the new varieties from Europe. Their malting properties are being examined to determine their suitability as parent stock in the breeding program.

Services to Other Organizations

As in the past the Laboratory's services and technical advice have been given to the Canadian Wheat Board, Commercial Counsellors and Trade Commissioners, and other Government agencies. Much of this work relates to promotion of sales of Canadian grain and plans have been made for a expansion of this program. Comparative quality tests on Canadian wheats and competing wheats from other countries continue to be made in a systematic manner, and the Canadian Wheat Board is informed of the results.

Co-operation in some projects has been maintained with the Brewing and Malting Barley Research Institute, Winnipeg, with the Crop Quality Council, Minneapolis, with certain branches of the Canada Department of Agriculture, and with Canadian grain companies. The Laboratory has continued active participation in the work of the American Association of Cereal Chemists and the International Association for Cereal Chemistry.

Research

Considerable improvement in the facilities and program of basic research has taken place during the year. This is consistent with the generally accepted policy that the Board's Research Laboratory should serve as the principal Canadian centre for research on cereal grain. Modern facilities for studies of the physical chemistry of wheat proteins, amino acid analysis, and lipid chemistry are being acquired.

Further progress has been made in basic research on the physical properties of dough (rheology), an area in which the Laboratory enjoys a high reputation among cereal laboratories in other countries. Kinetic studies of the reaction of bromate in dough are providing basic information on dough chemistry. Considerable success has been achieved in research on the chemistry of lipides in flour and their role in determining the quality of flour.

In applied research on wheat, further improvements have been made in experimental milling techniques, and for hard red spring wheat, results are now equal to those obtained by top commercial mills; research is now being directed to achieving similar performance in milling semolinas from durum wheats. The study of wheat conditioning techniques has been proceeding concurrently with this program. A program of research is once again underway on durum quality, seeking more effective means of measuring and expressing macaroni color. With the recent acquisition of suitable equipment, the investigation of the mechanism of flour deterioration during storage is being reopened. Again this year a number of smaller research projects have been carried out in connection with problems raised by local crop conditioners or by overseas buyers.

The four additional malting units for use in barley research have been completed and will be in operation shortly. This completes the program in construction begun several years ago, and provides improved facilities for both service studies and research. During the past year, investigations of varieties of different wort nitrogen content indicate that low wort nitrogen in varieties is accompanied by basic deficiencies, probably of enzymatic nature, which cause reduced brewhouse yield and wort fermentability.

cytolytic enzyme systems that differ widely in ratio of viscosity-decreasing activity to saccharide-production activity have been isolated and are under study. As barley anthocyanogen pigments have been recently implicated in production of chill haze in beer, studies on the occurrence of these in Canadian barleys and malts are now under way, and varietal differences in rate of pigment degradation during mashing have been established. In this area, information is being exchanged with the Haze Committee of the European Brewery Convention.

During the year 13 scientific papers dealing with the more basic aspects of research in the Laboratory have been published or have been accepted for publication in scientific journals.

Staff and Facilities

Dr. Narayanan of the Central Food Technological Research Institute, Mysore, India, who, a year ago, received a National Research Council Post Doctorate Fellowship, tenable in the Laboratory, was given an additional award for another year to make it possible for him to continue his studies on lipides and antioxidants under Dr. Hlynka. Mr. R. R. Matsuo is continuing his leave at the University of Alberta where he is studying for a Ph.D degree. Dr. E. J. Bass resigned his position as chemist, after 12 years of service in the Laboratory, to take a senior position with the International Milling Company, Minneapolis. Miss Jean McMullan resigned her position to be married, and Mrs. Cecylia Marek replaced her on the professional staff. One of the two positions for summer students was filled by Mr. Barry McLennan. Several resignations and additions also occurred in the sub-professional staff.

Additional space acquired during the year is being outfitted into an office and laboratory area. The durum wheat equipment will be moved into this area to relieve overcrowding in the baking section.

Overseas Visits and Visitors

In the late spring Dr. Anderson went overseas to attend three scientific meetings: the Congress of International Association for Cereal Chemistry in Vienna, Austria (Dr. Anderson was president of this society); the Scandinavian Association of Cereal Chemists in Oslo, Norway; and the Netherlands Section of Belgian-Netherlands Association for the Study of Cereals, Wageningen. His itinerary also included visits to the Scandinavian countries, Switzerland, Belgium and the United Kingdom. In the fall of the year Dr. Anderson accompanied the Chief Commissioner to Japan and Hong Kong. From there he went to Australia to attend the meeting of the Royal Australian Chemical Institute at Leura. Dr. Anderson also visited wheat-growing areas in northern New South Wales and southern Queensland to study production, handling and storage of Australian grain. The wheat industry in New Zealand was also studied during a short visit to both North and South Islands. Research institutions were visited in both countries and addresses were given to various groups of millers, bakers and cereal chemists.

Dr. Irvine represented the Board of Grain Commissioners at the Netherlands Bakery Foundation (NEBATO) Exhibition in Amsterdam early in the spring. After the meeting, he visited mills, bakeries and research institutions in the United Kingdom, France, Germany and Belgium.

The Laboratory was visited by missions from India, Peru and the Federal Republic of Germany. There were also visitors from the Far and Middle East, Europe, South America, South Africa, New Zealand, Australia, United Kingdom, and U.S.A.

APPENDIX G

Canadian Government Elevators

A. E. JACOBSON, *General Manager*

In accordance with the provisions of Section 166 of the Canada Grain Act and Order-in-Council P.C. 1372 of August 19, 1925, the Board manages and operates five interior terminal elevators at Moose Jaw, Saskatoon, Calgary, Edmonton and Lethbridge, and one terminal elevator at Prince Rupert, and leases one terminal elevator at Port Arthur.

In the 1959-60 crop year, interior and Prince Rupert elevators continued to be operated under a Semi-Public Terminal Elevator License. Port Arthur continued under lease to McCabe Grain Company Limited.

Handlings

Receipts in 1959-60 were 7.8% lower than in 1958-59 (17.4 million bushels compared to 18.9 million bushels). Shipments were up by 8.5% (18.1 million bushels, 16 million bushels) which is reflected in a lower in-store figure at the end of the crop year. Wheat receipts were 4.1 million bushels (24% of total receipt) and barley receipts were 11.6 million bushels (66% of total receipts). The wheat and barley totalled 90% of all receipts. Receipts of rapeseed dropped from 4.6 million in 1958-59 to 1.6 million in 1959-60. Rapeseed was handled at Saskatoon, Calgary and Edmonton; Prince Rupert handled barley only. Receipts and shipments by elevator were as follows:

Elevator	Capacity	Stocks August 1, 1959	Net Receipts	Net Shipments	Stocks July 31, 1960	Audit Adjustment
	million bu.	bu.	bu.	bu.	bu.	bu.
Moose Jaw	5.50	5,395,723	165,297	185,820	5,375,200	
Saskatoon	5.50	4,379,042	1,396,786	2,235,011	3,540,817	
Calgary	2.50	1,005,479	3,679,424	3,787,733	896,512	-658
Edmonton	2.35	1,248,953	2,268,420	2,689,304	828,003	-66
Lethbridge	1.25	950,371	434,064	336,684	1,047,751	
Prince Rupert	1.25	341,229	9,475,678	8,896,326	920,581	
Totals	18.35	13,320,797	17,419,669	18,130,878	12,608,864	-724

Charges

Storage charges at all elevators are unchanged: Interior elevators 1 1/4¢, Prince Rupert at 1 30¢ per bushel per day. Storage and elevator charges at Prince Rupert are the same as those in effect at the Lakehead and other Pacific Coast ports. Elevation charges at the interior elevators for wheat, oats, barley and corn are 1 1/4¢ per bushel, 1¢ per bushel lower than charges at the Lakehead and Pacific Coast ports; charges on rye and flax are 1 1/4¢ per bushel and 2 3/8¢ per bushel respectively, are both 1 1/2¢ per bushel lower than at the Lakehead and Pacific Coast ports.

Maintenance

Concrete restoration at the Saskatoon Elevator by the Repair and Reconstruction Unit is virtually completed; the only substantial part left to do being the painting. Similar work is being done in Moose Jaw and is now well advanced. Buildings, machinery and trackage continued to be maintained in good condition.

Work was completed on the installation of dry stand pipes for fire protection at all elevators. The modernization of electrical fixtures and light distribution systems, in compliance with elevator safety codes, is proceeding at Moose Jaw, Saskatoon and Calgary and is almost completed. Similar work was started this year at Edmonton and Prince Rupert. At Port Arthur, electro-magnets were installed to remove metal from grain; a vessel loading spout was installed; the heating system in office buildings revised; and some work was done in repairing revetment channels and tie rods on the dock. At Calgary, one drier was completely replaced by a Randolph direct-heat oil fired unit, thus permitting the drying of all grains, including small oil seeds such as Rapeseed, which was not possible with existing equipment. The other drier was converted from coal to oil heat. At Edmonton, a garner alarm signal system was installed. At Prince Rupert, the railway trestle was replaced in its entirety.

Staff

Staff employed as at December 31, 1960, compared with figures at December 31, 1959, is as follows:

	1960		1959	
	Continuing Establishment	Casuals	Continuing Establishment	Casuals
Winnipeg (Head Office).....	8	—	8	—
Moose Jaw.....	32	—	32	—
Saskatoon.....	33	8	29	15
Calgary.....	32	4	33	3
Edmonton.....	32	—	32	—
Lethbridge.....	19	1	19	—
Prince Rupert.....	31	—	31	25
Repair and Reconstruction Unit..	3	—	3	4
	190	13	187	47

Revenue and Expenditure

Revenue and expenditure for the fiscal year 1959-60 compared with the previous fiscal year were as follows:

	1959-60	1958-59
Revenue.....	\$1,956,557	\$2,112,904
Expenditure.....	1,552,578	1,382,451
Surplus	403,979	730,453

For the first nine months of the current fiscal year revenue was \$1,642,343, and expenditure was \$986,563.

APPENDIX H

Table H-1.—EXPENDITURE, by Point, Branch and General Item, Fiscal Year ended March 31, 1960

Point and Branch	Salaries	Rent	Travel	General	Total
	\$	\$	\$	\$	\$
WINNIPEG					
Executive.....	64,060.22	12,839.92	6,336.29	8,907.74	92,144.1
Assistant Commissioner.....	11,619.96	1,080.00	1,870.61	243.96	14,814.5
Registration.....	41,144.49	4,766.16	403.50	756.92	47,071.0
Research Laboratory.....	216,326.36	36,347.04	9,169.88	77,085.94	338,929.2
Statistics.....	115,416.88	12,471.56	865.24	37,070.44	165,824.1
Appeal Tribunal.....	6,660.00	—	—	959.89	7,619.8
Standards Committee.....	—	—	1,472.07	1,280.00	2,752.0
Inspection.....	581,788.88	29,776.48	6,220.98	77,344.27	695,130.6
Weighing.....	53,677.91	2,173.56	1,484.06	693.14	58,028.6
CHURCHILL					
Inspection.....	25,986.04	15.66	5,245.46	798.76	32,045.9
Weighing.....	15,875.90	10.34	3,720.98	508.48	20,115.7
KEEWATIN					
Inspection.....	3,379.20	—	—	—	3,379.2
Weighing.....	10,192.76	—	—	48.50	10,241.2
SASKATOON					
Assistant Commissioner.....	12,099.96	—	2,180.56	216.87	14,497.3
Inspection.....	42,900.11	877.00	744.03	682.77	45,203.9
Weighing.....	28,906.60	—	55.72	83.00	29,045.3
MOOSE JAW					
Inspection.....	28,634.40	1,740.00	115.92	758.92	31,249.2
Weighing.....	16,871.54	—	—	15.58	16,887.1
REGINA					
Assistant Commissioner.....	13,559.71	1,897.56	1,348.95	386.51	17,192.7
MEDICINE HAT					
Inspection.....	9,096.12	726.00	270.15	170.69	10,262.9
Weighing.....	9,964.46	—	—	26.60	9,991.0
LETHBRIDGE					
Inspection.....	7,743.57	—	803.26	80.11	8,626.9
Weighing.....	4,680.00	—	—	9.00	4,689.0
CALGARY					
Inspection.....	112,187.37	7,297.00	2,573.50	4,497.34	126,555.2
Weighing.....	49,326.65	792.00	1,887.90	164.05	52,170.8
Appeal Tribunal.....	6,660.00	987.00	122.70	1,733.90	9,503.8
EDMONTON					
Inspection.....	110,390.60	9,395.50	2,758.62	6,552.81	129,097.5
Weighing.....	16,637.04	—	62.32	46.84	16,746.1
Appeal Tribunal.....	6,660.00	1,170.00	108.35	960.83	8,899.1
Assistant Commissioner.....	12,099.96	1,992.00	4,404.76	348.54	18,845.9
VANCOUVER					
Inspection.....	217,632.74	8,611.92	2,058.08	7,188.86	235,491.1
Weighing.....	206,833.44	3,293.88	2,529.04	1,606.90	214,263.1
Registration.....	11,914.40	2,239.20	—	343.35	14,496.1
VICTORIA					
Inspection.....	10,439.49	—	—	—	10,439.49
Weighing.....	8,513.00	—	441.63	—	8,954.1

Table H-1.—EXPENDITURE, by Point, Branch and General Item, Fiscal Year ended March 31, 1960—Concluded

Point and Branch	Salaries	Rent	Travel	General	Total
PRINCE RUPERT	\$	\$	\$	\$	\$
Inspection.....	13,097.33	—	—	—	13,097.33
Weighing.....	12,438.62	—	—	66.00	12,504.62
FORT WILLIAM					
Inspection.....	829,972.32	24,780.00	8,966.31	16,804.10	880,522.73
Weighing.....	662,631.39	5,328.00	38,239.63	8,283.00	714,482.02
TORONTO					
Inspection.....	9,156.73	1,200.00	269.55	360.08	10,986.36
Weighing.....	4,680.00	—	—	10.20	4,690.20
CHATHAM					
Inspection.....	36,249.52	4,320.00	11,571.70	1,059.56	53,200.78
OTTAWA					
Inspection.....	13,020.00	—	3,999.38	344.01	17,363.39
Montreal					
Inspection.....	122,130.14	5,595.00	14,636.08	3,970.55	146,331.77
Weighing.....	5,167.50	1,200.00	64.50	406.58	6,838.58
Registration.....	18,420.00	2,400.00	—	533.18	21,353.18
Totals.....	3,816,843.31	185,322.78	137,001.71	263,408.77	4,402,576.57

Table H-2.—Accrued Revenue, by Point and Branch, Fiscal Year ended March 31, 1960

Point and Branch	Fees	Samples Sold	Other Revenue (a)	Total
WINNIPEG	\$	\$	\$	\$
Executive.....	—	—	—	—
Statistics.....	29,370.00	—	21.50	29,391.50
Registration.....	25,454.93	—	4.76	25,459.69
Appeal Tribunal.....	1,167.00	—	—	1,167.00
Inspection.....	327,980.41	8,529.09	3,203.26	339,712.76
Weighing.....	25,108.03	—	687.81	25,795.84
CHURCHILL				
Inspection.....	68,363.89	—	—	68,363.89
Weighing.....	34,170.94	—	—	34,170.94
KEEWINATIN				
Inspection.....	3,390.24	—	392.24	3,782.48
Weighing.....	9,805.86	—	445.72	10,251.58
SASKATOON				
Inspection.....	22,084.53	858.90	—	22,943.43
Weighing.....	11,282.79	—	—	11,282.79
MOOSE JAW				
Inspection.....	7,828.77	285.37	179.40	8,293.54
Weighing.....	4,125.76	—	533.22	4,658.98
MEDICINE HAT				
Inspection.....	15,958.85	165.05	13.12	16,137.02
Weighing.....	11,518.06	—	244.46	11,762.52

Table H-2.—Accrued Revenue, by Point and Branch, Fiscal Year ended March 31, 1960
Concluded

Point and Branch	Fees	Samples Sold	Other Revenue (a)	Total
	\$	\$	\$	\$
LETHBRIDGE				
Inspection.....	2,124.25	106.66	—	2,230.91
Weighing.....	287.86	—	—	287.86
CALGARY				
Inspection.....	107,296.67	2,549.69	554.25	110,400.61
Weighing.....	20,555.03	—	368.12	20,923.15
Appeal Tribunal.....	2,205.00	—	—	2,205.00
EDMONTON				
Inspection.....	82,832.85	1,522.33	565.00	84,920.18
Weighing.....	4,700.11	—	91.56	4,791.67
Appeal Tribunal.....	993.00	—	—	993.00
VANCOUVER				
Inspection.....	310,728.13	10,211.85	580.24	321,520.22
Weighing.....	235,339.80	—	1,634.44	236,974.24
Registration.....	12,564.45	—	—	12,564.45
VICTORIA				
Inspection.....	5,163.77	—	—	5,163.77
Weighing.....	3,720.38	—	—	3,720.38
PRINCE RUPERT				
Inspection.....	21,628.63	182.60	—	21,811.23
Weighing.....	15,075.78	—	—	15,075.78
FORT WILLIAM				
Inspection.....	611,834.84	8,496.90	1,592.38	621,924.12
Weighing.....	462,353.47	—	3,916.37	466,269.84
TORONTO				
Inspection.....	4,766.88	118.50	4.92	4,890.30
Weighing.....	5,222.30	—	—	5,222.30
CHATHAM				
Inspection.....	30,967.19	475.55	984.61	32,427.35
MONTREAL				
Inspection.....	7,652.34	568.16	760.35	8,980.85
Weighing.....	150.97	—	1.80*	152.77
Registration.....	8,299.91	—	—	8,299.91
Totals.....	2,554,073.67	34,070.65	16,779.53	2,604,923.85

(a) Details in Table H-4.

* Refund of Previous Year's Expenditure.

Table H-3.—Accrued Revenue and Net Expenditure, by Points and Branches, Fiscal Year ended March 31, 1960

	Inspection	Weighting	Appeal Tribunals	Registration	Statistics	Research	Laboratory	Grain Standards Committees	Administration	Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
REVENUE										
Winnipeg.....	339,712.76	25,795.84	1,167.00	25,459.69	29,391.50	—	—	—	—	421,526.79
Churchill.....	68,363.89	34,170.94	—	—	—	—	—	—	—	102,534.83
Keewatin.....	3,782.48	10,251.58	—	—	—	—	—	—	—	14,034.06
Saskatoon.....	22,943.43	11,282.79	—	—	—	—	—	—	—	34,226.22
Moose Jaw.....	8,293.54	4,638.98	—	—	—	—	—	—	—	12,952.52
Regina.....	—	—	—	—	—	—	—	—	—	—
Medicine Hat.....	16,137.02	11,762.52	—	—	—	—	—	—	—	27,899.54
Medicine Hat.....	2,230.91	287.86	—	—	—	—	—	—	—	2,518.77
Lethbridge.....	110,400.61	20,923.15	2,205.00	—	—	—	—	—	—	133,528.76
Calgary.....	84,920.18	4,791.67	993.00	—	—	—	—	—	—	90,704.85
Edmonton.....	321,320.22	236,974.24	—	12,564.45	—	—	—	—	—	571,058.91
Vancouver.....	5,163.77	3,720.38	—	—	—	—	—	—	—	8,884.15
Victoria.....	21,811.23	15,075.78	—	—	—	—	—	—	—	36,887.01
Prince Rupert.....	621,924.12	466,269.84	—	—	—	—	—	—	—	1,088,193.96
Fort William.....	4,890.30	5,222.30	—	—	—	—	—	—	—	10,112.60
Toronto.....	32,427.35	—	—	—	—	—	—	—	—	32,427.35
Chatham.....	8,980.85	152.77	—	—	8,299.91	—	—	—	—	17,433.53
Ottawa.....	—	—	—	—	—	—	—	—	—	—
Montreal.....	—	—	—	—	—	—	—	—	—	—
Totals.....	1,673,502.66	851,340.64	4,365.00	46,324.05	29,391.50	—	—	—	—	2,604,923.85

Table H-3.—Accrued Revenue and Net Expenditure, by Points and Branches, Fiscal Year ended March 31, 1960—Concluded

	Inspection	Weighing	Appeal Tribunals	Registra- tion	Statistics	Research Laboratory	Grain Standards Commit- tees	Adminis- tration	Total
							\$	\$	
EXPENDITURE									
Winnipeg.....	695,130.61	58,028.67	7,619.89	47,071.07	165,824.12	338,929.22	2,752.07	106,958.70	1,422,314.35
Churchill.....	32,045.92	20,115.70	—	—	—	—	—	—	52,161.62
Keewatin.....	3,379.20	10,241.26	—	—	—	—	—	—	13,620.46
Saskatoon.....	45,203.91	29,045.32	—	—	—	—	—	—	88,746.62
Moose Jaw.....	31,249.24	16,887.12	—	—	—	—	—	—	48,136.36
Regina.....	—	—	—	—	—	—	—	—	17,192.73
Medicine Hat.....	10,262.96	9,991.06	—	—	—	—	—	—	20,254.02
Lethbridge.....	8,626.94	4,689.00	—	—	—	—	—	—	13,315.94
Calgary.....	126,555.21	52,170.60	9,503.60	—	—	—	—	—	188,229.41
Edmonton.....	129,097.53	16,746.20	8,899.18	—	—	—	—	—	173,568.17
Vancouver.....	235,491.60	214,263.26	—	14,496.95	—	—	—	—	464,251.81
Victoria.....	10,439.49	8,954.63	—	—	—	—	—	—	19,394.12
Prince Rupert.....	13,097.33	12,504.62	—	—	—	—	—	—	25,601.95
Fort William.....	880,522.73	714,482.02	—	—	—	—	—	—	1,505,004.75
Toronto.....	10,986.36	4,690.20	—	—	—	—	—	—	15,676.56
Chatham.....	53,200.78	—	—	—	—	—	—	—	53,200.78
Ottawa.....	17,363.39	—	—	—	—	—	—	—	17,363.39
Montreal.....	146,331.77	6,838.58	—	21,353.18	—	—	—	—	174,523.53
Totals.....	2,448,984.97	1,179,648.24	26,022.67	165,824.12	338,929.22	2,752.07	157,494.08	4,402,576.57	

Table H-4.—Summary of Operations by Branches, Fiscal Year ended March 31, 1960

	Inspection	Weighing	Appeal Tribunals	Registration	Statistics	Research Laboratory	Grain Standards Committees	Administration	Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$
REVENUE									
Fees.....	1,630,602.24	843,417.14	4,365.00	46,319.29	29,370.00	—	—	—	2,554,073.87
Samples Sold.....	34,070.65	—	—	—	—	—	—	—	34,070.65
Other Revenue:									
Overtime Refunded.....	4,912.94	7,849.70	—	—	—	—	—	—	12,762.64
Express Charges.....	3,880.50	—	—	—	—	—	—	—	3,880.50
Jury Fees.....	24.00	72.00	—	—	—	—	—	—	96.00
Fines.....	—	—	—	—	—	—	—	—	—
Refund of Previous Year's Expenses.....	12.33	—	—	—	—	—	—	—	1.80
Miscellaneous Revenue.....	—	—	—	—	—	—	—	—	38.59
Totals	1,673,502.66	851,340.64	4,365.00	46,324.05	29,391.50	—	—	—	2,604,923.85
EXPENDITURE									
Salaries.....	2,173,804.56	1,106,396.81	19,980.00	71,477.89	115,416.88	216,326.36	—	—	3,816,843.31
Rent.....	94,334.56	12,797.78	2,157.00	9,405.36	12,471.56	36,347.04	—	—	185,322.78
Travel.....	60,233.02	48,485.78	231.05	403.50	865.24	9,169.88	1,472.07	1,280.00	137,001.71
General Expenses.....	106,227.75	6,845.99	3,631.85	1,428.35	6,861.78	71,191.99	—	—	206,013.60
Printing and Stationery.....	14,385.08	5,121.88	22.77	205.10	30,208.66	5,893.95	—	—	57,395.17
Totals	2,448,984.97	1,179,648.24	26,022.67	82,921.20	165,824.12	338,929.22	2,752.07	157,494.08	4,402,576.57

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Regulation
No.

1			Elevator Warehouse
2			Warehouse Receipts and
3			
4			
5			
6			
7			
8			Inspection Point.
9			Appeal Tribunals.
10			Provincial Ports.
11			Saint John, N.B.
12			Saint John, N.B.
13			St. John, N.S.
14			
15			
16			
17			
18	Procedure, Country Elevators.		
19	Receipt for Grain Delivered to Private Country Elevators and Mill Elevators.		
20	Maximum Tariff of Charges, Eastern Elevators.		
21	Maximum Tariff of Charges and Shrinkage Allowance, Country Elevators.		
22	Maximum Tariff of Charges, Terminal Elevators.		
23	Applications for Licenses, and Terms and Conditions under which Licenses are issued.		
24	Storage in Transit of Grain Grown Outside Canada.		
25	Tickets and Receipts—Country Elevators.		
26	Grain Treated with Poisonous Materials.		
27	Shipment of Infested Grain.		

APPENDIX I

Regulations

Regulations in effect December 31, 1960, made in accordance with the provisions of the Canada Grain Act

Regulation

No.

- 1 Registration and Cancellation of Terminal Elevator Warehouse Receipts.
- 2 Registration and Cancellation of Eastern Warehouse Receipts and Transfer Receipts.
- 3 Plans re Terminal and Eastern Elevators.
- 4 Cleaning of Grain and Bins.
- 5 Off Grades for Western Grain.
- 6 Off Grades for Eastern Grain.
- 7 Grades of Screenings.
- 8 Inspection of Samples taken other than at an Inspection Point.
- 9 Appeals from Inspecting Officers to Grain Appeal Tribunals.
- 10 Delivery of Grain to Ocean Vessels at St. Lawrence Ports.
- 11 Delivery of Grain to Ocean Vessels at West Saint John, N.B.
- 12 Delivery of Grain to Ocean Vessels at East Saint John, N.B.
- 13 Delivery of Grain to Ocean Vessels at Halifax, N.S.
- 14 Enforcement of Lien by Sale of Grain.
- 15 Drying of Grain.
- 16 Fees.
- 17 Records, Reports and Returns.
- 18 Procedure, Country Elevators.
- 19 Receipt for Grain Delivered to Private Country Elevators and Mill Elevators.
- 20 Maximum Tariff of Charges, Eastern Elevators.
- 21 Maximum Tariff of Charges and Shrinkage Allowance, Country Elevators.
- 22 Maximum Tariff of Charges, Terminal Elevators.
- 23 Applications for Licenses, and Terms and Conditions under which Licenses are issued.
- 24 Storage in Transit of Grain Grown Outside Canada.
- 25 Tickets and Receipts—Country Elevators.
- 26 Grain Treated with Poisonous Materials.
- 27 Shipment of Infested Grain.

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